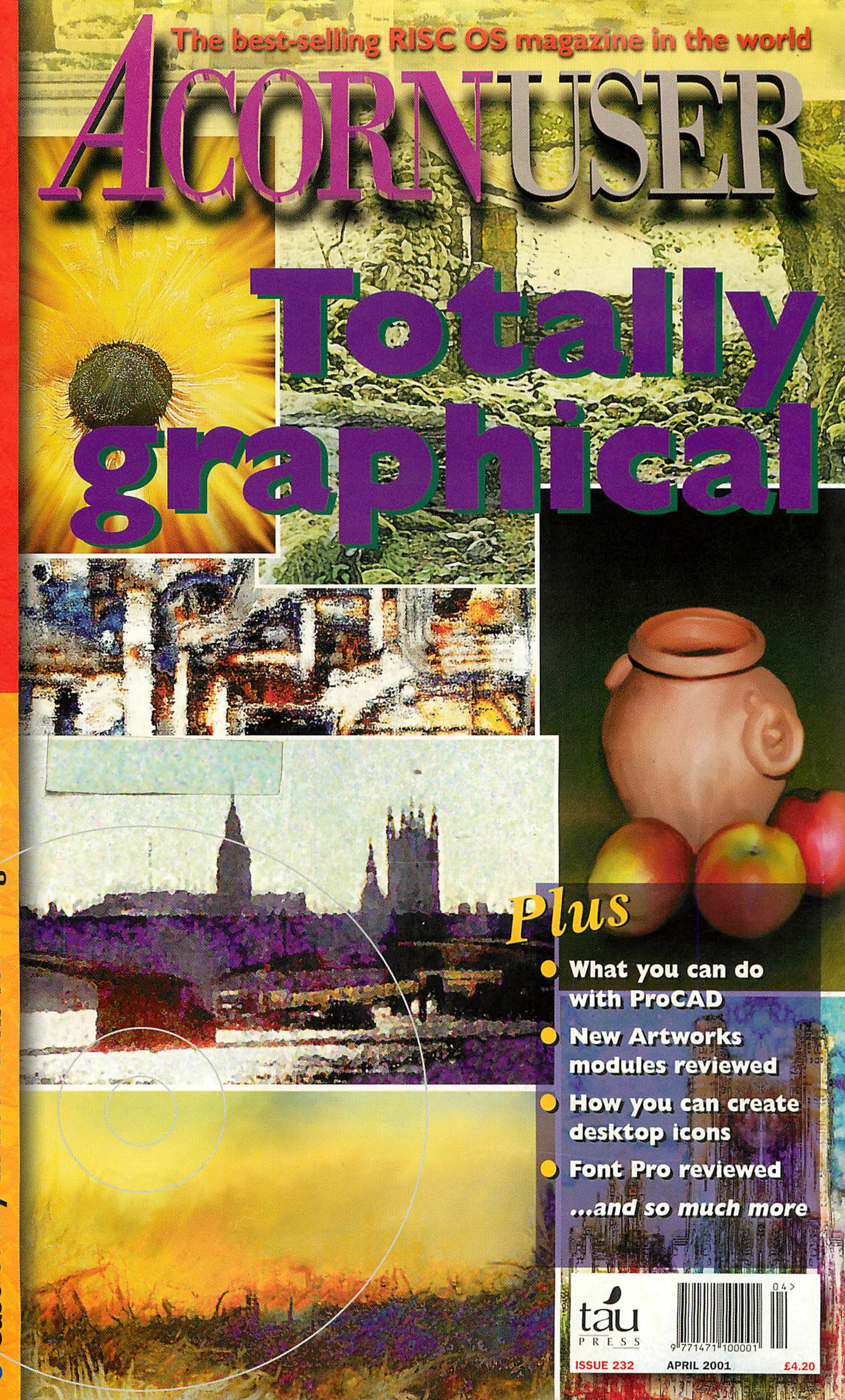
Internet News
- The Internet: Your final step in getting completely connected

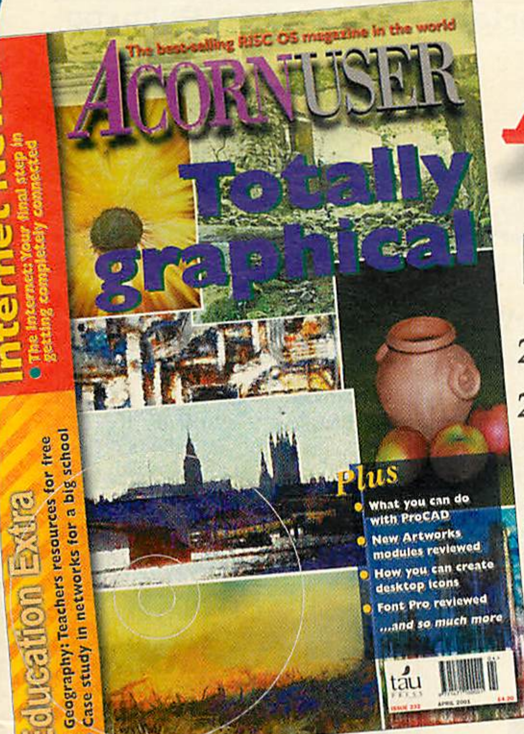
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- Geography: Teachers resources for free
- Case study in networks for a big school



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April 2001

ACORN USER



Features

Regulars

May issue on sale 19th April 2001



Here is a thought: The RISC OS market is beginning to come to life. And I really think it is. Perhaps part of it is that Spring is in the air — as I write this it is the first warm truly Spring-like day we've had this year.

There is an optimism, a definite feeling that this time we have really got something we can use. The (late) Springtime Wakefield Show is on its way and this time we can look forward to the unveiling of several revolutionary new products, *Vantage* (at last), *Omega* (keep various parts of your anatomy crossed) and other things we can't talk about.

It cannot be denied that the Autumn announcement of the Omega was unfortunate — many people feel that the end result has been another "Phoebe-effect" people have stopped buying other machines in anticipation of this new one. And it's probably true.

But the situation with Acorn was simply rank stupidity, announcing a machine two and a half years before its released, slowly degrading the original specification, and then not actually delivering.

At least in this case it wasn't intentional — what can you do when you've ordered a couple of thousand of a particular, specialised, graphics chip and you keep getting queue-jumped by companies who have ordered 100,000 or more.

So it's back to the drawing board and time to turn the original simulation of one type of chip into a version that can be implemented on a programmable chip. Not an easy task — just like writing a piece of code but it has to work right. Unlike a piece of software with some bugs any errors in this chip can mean no function at all.

So we have to wait. And some people grumble but the rest of us wait hopefully and patiently — let's face it, we've already waited a while, a little more won't hurt. And when it arrives I think we will be pleased with the overall result.

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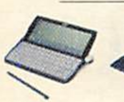
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JAZ 2GB Parallel ext.		£299.00	£351.32
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Orb 2.2 GB Parrallel		£199.00	£233.83
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4GB Parrallel Pullman		£139.00	£163.33
4GB P'llel Datasafe		£119.00	£139.83
10GB IDE Pullman		**£95.00**	**£111.62**
10GB P,llel Pullman		£155.00	£182.12
10GB P'llel Datasafe		£135.00	£158.62
20GB IDE Pullman		**£105.00**	**£123.37**
20GB P'llel Pullman		£165.00	£193.87
20GB P'llel Datasafe		£145.00	£170.37

Removable IDE drives may require s/w drivers or hardware support i.e. RiscStation or Simtec.
Parallel Drives include RISCOS Software

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IDE 8x8x32x CDR/W	£139.00	£163.33
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External versions Available

Wakefield charities benefit

You should already have your diaries marked for Wakefield 2001 on Saturday and Sunday 19th and 20th May at Thornes Park Athletics Stadium, Horbury Road, Wakefield. As usual there will be a Bring and Buy Charity Stand which will provide an excellent opportunity to clear your shelves of unwanted items of computer hardware, software and accessories. Show visitors will be able to browse through the donated items and pick up some surprising bargains.

While donations brought along to the show will be very welcome, it would be even more helpful if items could be posted, or delivered, in advance.

Wakefield Hospice, who will be the principal beneficiary have kindly volunteered to receive and store items for the stand until showtime.

These should go to: Wakefield Hospice (Fund Raising) Ltd, Hemingway House, Thornes Moor Business Park, Thornes Moor Road, Wakefield WF2 8PG and please mark donations for the attention of Terry Rigg — Wakefield 2001 Show. Goods can be received between 8:30am and 3:30pm on weekdays.

Wakefield 2001

The Acorn RISC OS Show

Running on the RISC

Back in the 1980s there was an interesting experiment into producing games (and other computer programs) that would work across the whole range of machines that were available at that time. The project succeeded but most games were limited to type-ins in magazines (remember those?).

The idea was that each computer type would have an interface program that you bought once and all games would be designed to work with that interface and run on any machine.

Although the project worked games designers were too hooked on using illegal calls to the innards of their favoured machine and the project fell by the wayside. FD Games have contacted *Acorn User* with an idea for a game that will work happily no matter what computer you might use — RISC OS, Mac or even Windows.

Interestingly they are sure they will encounter no problems even if RISC OS machines are upgraded to 32-bit architecture.

FD Games' spokesperson, Anne Browne, has agreed to offer *Acorn User* readers the chance to win one their first games. *Qiddle* is based on the world's oldest game before the legendary confusion of Babylon.

Anne says that "The game was chosen as the original predates the confusion caused by multiplicity of languages and our version celebrates our ability to communicate again."

Acorn User readers will be the first to have a chance to obtain one of the new games by contacting FD Games (Dept AF1) on 07747 898880 before noon on the first Sunday in April. One lucky *Acorn User* reader will be offered a free copy of *Qiddle*. Other computer users will be allocated different time slots so please don't contact them after that date.

We appreciate that this is short notice and will disadvantage overseas readers and FD Games have agreed to accept e-mails from those readers for a later draw. As we don't yet have FD Games e-mail address overseas readers should e-mail **news@acornuser.com** and we will pass on your names.



Benny and Brains have nothing on it

Microlynx is releasing version 2 of its TopCat product. The new version includes: Long Filenames in RISC OS; Sound support in Windows; New Topcat Client which supports DHCPØ; Simple Load Sharing of multiple Citrix servers; Compatible with Windows 2000; Sample scripts for printing and e-mail; Includes demo version of Oregano web browser; File conversion Utility; Client Upgrade utilities; Local Settings allow easy way to select Filer; Increased Security — Boot Password configurable in DHCP Manager; Various improvements to operation



While a new TopCat Client is provided as part of this release, existing ones can be used without any problems

TopCat is software which is installed on an NT or Windows 2000 Server to provide a RISC OS desktop and applications to Acorn Computers — for example A3020, A4000, A5000, A7000/+, Risc PCs, Network Computers (NCs, Sprinters, Cumana 'R' NC etc).

TopCat also includes Citrix's ICA Client, which when used with Citrix Metaframe, allows Acorn computers to run all the latest Windows applications, such as Microsoft's Office suite (Word, Excel, Access, Powerpoint etc), even on Acorn machines with as little as 4Mb memory. Topcat also makes connecting Acorn machines to the Internet a doddle.

For further information visit the microlynx web site at: www.microlynx.co.uk. The new version will cost £499, but existing Topcat Customers can upgrade for the special price of £250. This offer is valid until 31st May 2001. Enquiries to:

roy@microlynx.co.uk

Bassoonists?

John Schroder, Assistant Principal Bassoon with the City of Birmingham Symphony Orchestra, has a Web page showing His Way of playing the Bassoon: **www.j-schroder.demon.co.uk/MyWay/MyWay.html**

Of equal importance to the Techniques, tips, hints, and eccentricities! on those pages is the program that he has written, using *DrWimp*. Fingering for RISC OS computers is available from: **www.j-schroder.demon.co.uk/Fingering/F410.zip** and another for Psion machines is available from the same site. The program stores and displays bassoon fingerings, trills and shakes (German system). It comes with my list of fingerings and more can be added using the program.

Parallel port MIDI interfaces

After six months (or more!) of not having any Parallel Port MIDI interfaces in stock for RISC OS machines, RComp have announced that a new batch of these interfaces has been produced and they now have (limited) stocks again.

They say they are aware that a number of people are interested in getting hold of these, so orders will be dealt with on a "first come, first served" basis.

The Parallel Port MIDI interfaces will work on almost any RISC OS machine, and provide in/out/thru MIDI connections. This allows connection, recording and playback via a whole range of MIDI keyboards and sound modules and so on.

The interfaces are supplied with the latest ESP drivers for wide ranging compatibility with music programs.

The interfaces cost £95 inc VAT or £150 in a special bundle with their powerful *Anthem* MIDI sequencer (a significant saving). R-Comp also have some MIDI podules in stock.

R-Comp Interactive
22 Robert Moffat
High Legh
Knutsford
Cheshire WA16 6PS
Tel: (+44) 01925 755043
Fax: (+44) 01925 757377
www.rcomp.co.uk



All the CAD in the world

The RiscCAD program written by David Buck, and mentioned in our Graphics Round-Up this month, is to be updated, maintained and marketed by APDL.
The new release now consists of a CD-ROM with documentation in HTML format on disc, or optionally with two printed manuals.

They are unfortunately going to have to revise the original pricing that had been released on the Internet. The CD-ROM edition alone will be priced at £59 inc VAT (£10 more), and the manual will be £10 no VAT (£10 less). For a limited time, orders placed at the originally posted price will be fulfilled, but after 1st April 2001 all orders should be at these rates.

To order, call APDL on 020 8778 2659. They will shortly have a RiscCAD web page available at **www.risccad.riscos.org.uk** — this presently points to the APDL Web site.

Psion/RISC OS

The fifth release of PsiFS is now available for free download from: **www.thouky.co.uk/software/psifs/**

The most significant changes from version 1.30 are: SIS files can be installed on EPOC devices by dragging their icon to the *PsiFS* iconbar icon or double-clicking with the left Alt key pressed.

The Add/remove control panel icon is automatically installed if necessary; The interface for third party file format converters has been extended to allow better integration; ARM2 processors are now supported.

Bug fixes include: Excessively long lines of owner information are now handled correctly; Action windows are no longer automatically closed if an error occurs; Backups can now be performed with the virtual drive option configured.

PsiFS is a freeware RISC OS file system that communicates with a remote SIBO or EPOC device via the Psion Link Protocol (PLP). Files can be manipulated as if they were on a local harddisc, albeit a slow one, so copying is simply a matter of dragging icons between filer windows. Full source code is available under the GNU General Public Licence.

Reasonably complete descriptions of the Psion Link Protocol and EPOC SIS file format are also available from the same web site under the GNU Free Documentation Licence.



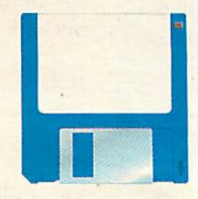
Ground Control to Major Vigay

Paul Vigay has released v2.02 of *Disc Commander* and v1.37 of *VZap* which are now available to download from his RISC OS Shareware page at **www.vigay.com/shareware.html**

Disc Commander is Paul's powerful disc editing and file recovery toolkit. It's compatible with all filing systems, including the RISC OS 4 extended filecore, as well as non-standard formats such as MacOS and DOS formats and so on. As such it can aid in the recovery of data from virtually any disc you can insert in the floppy drive.

Containing a full disc sector editor you can examine, edit and modify any sector on your discs. You can now register *Disc Commander* online via secure credit card transaction using the popular Sharereg system.

VZap is his anti-virus system for RISC OS, which includes free updates and support. Version 1.37 now incorporates automatic detection of *Disc Commander* and is thus free to all registered *Disc Commander* users. Being automatic, this saves you having to contact Paul for a separate registration code for *VZap* if you've already registered *Disc Commander*. You need to make sure *Disc Commander* has been 'seen' before you run *VZap*. Details from **www.vigay.com**



In brief

1001 uses for Acorn

Andrew Harmsworth is trying to put together a comprehensive list of uses that can be made for old Acorns. For example, datalogging with an A3000 is as educationally valid as with a StrongARM Risc PC, and not a whole lot slower.

If you can contribute to ideas of ways in which they put Acorn kit to use in novel ways, perhaps just running a single piece of software that you find invaluable then let us know at news@acornuser.com and we'll pass them on to Andrew.

Price point

Sorry I'm afraid we managed to get some facts wrong in our review of DialUp. The prices are not £30 £20 £10 but: £20 if they own no R-Comp products; £15 if they own (or purchase at the same time) Messenger Pro £10; if they own (or purchase at the same time) WebsterXL. R-Comp also confirm that DialUp does work with the ANT Apps.

Our review of SiteWriter also made a price error, but due to a price reduction at the time of the review. We're pleased to say that the software is available for only £38.

End of an era

Apparently the world's first webcam, the famous Coffee pot one which used an Acorn A310 and a Watford Digitiser, is to be switched off.

Multi-calendars

Stephen Murphy has updated his MakeCal program. MakeCal is a freeware calendar generator for all RISC OS computers. Changes in this release include: Can make calendars in German and Dutch as well as English; Correct spelling of 'Landscape' on main window; Program structure changed to allow foreign language versions **web.ukonline.co.uk/stephen.murphy/**

We know it's early...

Michael Martin has put a

Continued...

Getting even better colour

A revised RISC OS printer driver has been developed for the Hewlett Packard DeskJet 895Cxi printer. The original driver provided settings for EconoFast, Normal and Best qualities with Plain Paper plus Normal and Best qualities with Special Paper where the type of Special Paper was not specified.

The revised driver provides settings for EconoFast, Normal and Best Black qualities with Plain Paper. It also provides specific settings, and sends the correct codes to the printer, for Normal quality with Transparency media, and Best quality with Coated Paper and Glossy paper.

Finally a more appropriate iconbar symbol is provided. Photo-realistic printing support is not provided. RISC OS 4 and !Printers 1.64 are recommended as also is an IEEE 1284 standard printer cable.

For more information please e-mail Jonathan Briggs at: **jbcb@globalnet.co.uk**

Even newer Millennium

DrawWorks New Millennium has been mentioned a few times in this issue of *Acorn User* and some time in March iSV went completely mad and are offering the program at nearly half price. For a limited time only you can get a copy of *DrawWorks New Millennium* for only £21.50 inclusive! A saving of £20.

DWNM is the application that turns the normal *Draw* that we know and love into a first rate commercial drawing package. *DWNM* is easy and simply to use with intuitive toolbars. Amazing effects can be produced easily and quickly. Drop shadows, text rotated around circles, shading, 3D effects and many more are only a couple of mouse clicks away.

Plus in a double Special Offer both of *DWNM* and *PublishArt98* are available together for only £26.50 (inclusive) saving £30 of their products' normal rrp. You can check the details of these products at: **www.isvproducts.co.uk**

To qualify for these special offers you must mention code AM-1 when ordering but note that the offer is limited.

ArtWorks repairs

There's much more about *ArtWorks* in this issue but just to show that Martin Würthner is doing more than simply writing new modules he has announced one more bug-fix for *ArtWorks*: Until now, deep sprites (those with 32k or 16M colours) could not be exported to *Draw*. Any attempt to export a document containing deep sprites as a drawfile gives the error message "Draw : (TranslatePath Procedures) No path header created." or "Draw : (Pull) Trying to pull a value with nothing on the draw parameter stack."

There is a fixed version of the *T_Draw* module, the module responsible for *Draw* export in *ArtWorks*. It can be downloaded from the new "Known ArtWorks bugs and fixes" page: **www.mw-software.com/ software/ awmodules/ awbugs.html# tdupdate**

He's also announcing an update to his *TextArea* and *BMExport* modules and purchasers should now have v1.07 of each of these.

Making Basic easier

Jaffa Software have announced the release of version 2.28 of *WimpWorks*. *WimpWorks* allows anyone with a simple knowledge of BBC BASIC to produce stunning multitasking applications which work with others on the Desktop, from simple clocks up to complete databases.

Existing users can upgrade through the web site and new versions are now supplied on CD, at the same low prices: Full version — £35.00 Upgrade from *WimpWorks* v1 — £10.00 [On receipt of original disk] Upgrade from *WimpBasic*, *HelixBasic*, *ArchWay* or *WimpGen*: £15.00 [On receipt of original disk(s)]

The new version is faster — decreased loading time by 33% and there are other improvements and bug fixes. More details can be found at the Jaffa Software Web site:

www.bleb.org/jaffasoft

In brief

Planner 2002 for Him and Her, on his Web site. It is in Draw format so will be handy for desktop publishers.

www.users.zetnet.co.uk/ mmartin/

ARM code tutorials

Matthew Bloch has written some tutorials for RISC OS programmers looking to break into hand writing ARM code. The tutorials are pretty terse, and apparently would sit well beside a copy of Nick van Someren's book on ARM programming. You can find the articles at **www.soup-kitchen.net/armcode**

Co-Comp Web site

Co-Comp, who we mentioned last month, regarding their new E-Commerce Shopping Basket System — M@rket-Live!, have recently updated their Web site, incorporating many new features and support materials.

One particular aspect, of the new site, to note is the customer support section that has hints and tips to help you get the most out of your hosting facilities. It also contains a customer support enquiry form which helps them gather details which make diagnosing problems easier.

www.co-comp.co.uk

Hidden software

For some time now the ARM Club's free software has been hidden away out of harms way on their FTP server. They have now linked the software to the Web site so hopefully it will start showing up on search engines, and enable people to find it more easily. The URL www.armclub.org.uk/free

They have also taken the opportunity to fix a bug in FreeMap which gave problems with disc that had absolutely no free space on them. All enquires on this software should be sent to

druck@armclub.org.uk

Contacting AU

news@acornuser.com
John Cartmell

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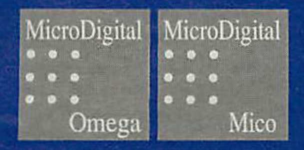
Acorn

Kinetic Risc PCs

Kinetic (32+4+2Mb, 10Gb HD, 48x CD)	£1099.00
Kinetic (64+4+2Mb, 10Gb HD, 44x CD)	£1179.00
Kinetic Internet (128+8+2Mb, 30Gb, 44x, 56K)	£1409.00

StrongARM Risc PCs

Risc PC 8+0Mb, 2Gb HD	£890.00
Risc PC 16+0Mb, 4Gb HD	£948.00
Risc PC 16+2Mb, 4Gb HD, 40x CD	£1039.00
Risc PC 32+2Mb 8Gb, DVD CD	£1099.00
Web Wizard – 32+2Mb, 8Gb HD, CD, speakers, Internet pack with Oregano & 56K modem	£1179.00



Order your Omega NOW!

Microdigital Computers

Mico	£Call
Omega	£1169.00
Optional Workstation case upgrade	£41.10
Optional 300W PSU upgrade	£17.60
Larger hard drives are available	£Call



RiscStation Computers

R7500 Lite (no monitor)	£598.00
R7500 Lite (with their 15" monitor)	£715.00
R7500 Lite (with their 17" monitor)	£774.00
R7500 Lite (with their 19" monitor)	£891.00

The Lite+ model is the same as the Lite, but has an 8.4Gb HD and 64Mb RAM fitted as standard.
R7500 Lite+ To Lite prices, please add £94.00

The Scorcher model is the same as the Lite, but has a 10Gb HD and 64Mb RAM fitted as standard, plus at least a 4x4x24 CD ReWriter, CD Burn and a blank disc.

R7500 Scorcher To Lite prices, please add £315.00
R7500 Scorcher Twindeck (as Scorcher, with additional 48x CD drive) To Lite prices, add £349.00

The Networx model is a Lite without the HD or CD fitted. Monitors are available as with the Lite.
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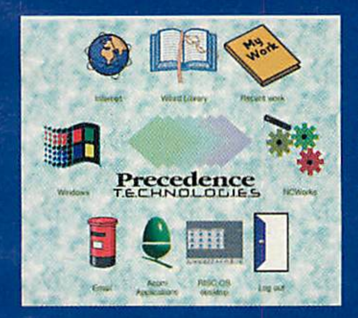




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Applications

Along with curriculum content and communications applications, TotalBoot NC installations can run Windows TM and Acorn RISC OS applications, providing access to a range of industry standard and education specific software titles.

All NC installations come with NC Works - an integrated productivity suite including word processor, spreadsheet, database, graphing tool, drawing tool, painting package and Web browser. NC's provide access to all the core ICT tools in an easy-to-use environment.



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Access

TotalBoot NC installations provide Internet access and e-mail for all stations - the communications tools needed to plug into the National Grid for Learning. A wealth of curriculum material, including Anglia Multimedia secondary or primary content covering all curriculum areas, provides a powerful intranet learning resource. In addition, TotalBoot NC installations come with Interchange which provides a curriculum index link to the World Wide Web, ensuring pupils have access to stable, educationally moderated and relevant sites.



Cost Effective

As all files and applications are managed centrally, NCs do not require hard discs, floppy drives or CD-ROM drives on each terminal. This gives dramatic savings on unit costs.

Because NCs have no moving parts, there is little that can go wrong. With PCs, most technical support requirements stem from changing user settings. Because this does not apply to NCs technical support is dramatically reduced. As a result, there are savings on repair bills and on costs associated with downtime and disruptions to teaching schedules.

Integration

TotalBoot NCs can be integrated into an existing ICT infrastructure protecting the school's investment and extending the lifespan of resources. Old PCs, including 386s and 486s, can be used as NC clients, giving a new lease of life to legacy systems.

NCs can be connected to networks of different platforms; run the same applications as exiting desktop PCs; and integrate seamlessly with established standards.



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Rummaging through your Draw

Have you noticed that you might have used a program for years when suddenly, with a slip of the fingers on a function key, you find yourself in an unexplored world. "I never knew it did that!"

It's the sort of thing that happens when you're working to a tight deadline and you can't spare the time to explore this new world — and by the time you have time you've forgotten all about your piece of serendipity.

The idea for this column came about from a response to "Beginning with Draw" in issue 230 (Acorn User, February). One of my more critical readers (my father) commented that he was unable to link my descriptions of *Draw*'s toolbar with the actual bar on screen. "You are using *Help* ... ?" I helpfully reminded him. Of course he wasn't.

It's surprising how many people don't appreciate that *Help* even exists. It doesn't seem to be mentioned in the early RISC OS Guides but it's on p359 of the User Guide for 3.5; p333 (chapter 26) for 3.6 and Chapter 26 in the on-line Guide for 3.7 (which RISC OS 4 users also have).

The original *Help* application opened a window which you could stick in a little-used portion of the screen where it would display information about whatever was under pointer as you moved the mouse. Some people didn't take to the *Help* window as your eye is probably on the pointer so the version of *Help* for RISC OS 4 brings up a small window next to the arrow whenever there is something interesting to say about that location.

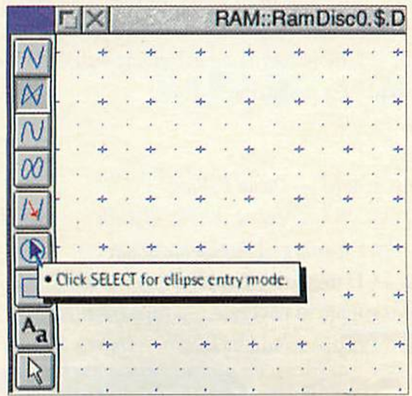


Figure I: Any form of bubble can help

Those of you using a version of RISC OS prior to RISC OS 4 can obtain *BubbleHelp* from David Pilling which does the same as the RISC OS 4 Help (except that it is far more configurable).

Help (or *BubbleHelp*) will give you information about the *Draw* toolbox, the options available at any one time and about the menus as you open them.

Help can work with other programs too. Note the 'can'. *Help* is implemented in *DrawWorks* but not for *ArtWorks* (though that has an alternative, less useful *Help* system). It is implemented in *Vector* but is limited and *Vector* has its own help system which works like the RISC OS 4 version.

Vantage implements *Help* thoroughly and transfers to its own in-built *Help* system where that is more appropriate. A plea to all software writers: we users will not understand your brilliant and appropriate icons until we've used the program half a dozen times or more. Implement *Help*. Please!

For the moment we simply need to know that we can find out more about *Draw* by loading *Help*. A quick check will reveal an error in my February article — I should have referred to the 'ellipse tool' rather than 'circle tool'. *(Figure 1)*

At this point I would (in school) instruct a class to 'go — explore'; so put this magazine down and go — explore.

Back so soon? Have you checked what *Help* has to say about each of *Draw*'s toolbar icons? And about each of the menu items (not forgetting sub-menus)? Are you surprised about all the short-cuts that are available for different zooms? Did you know that you could change the colour of the grid?

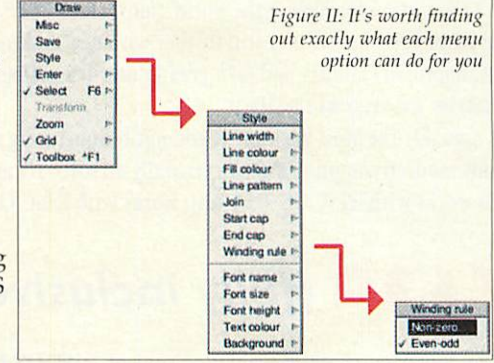


Figure II: It's worth finding out exactly what each menu option can do for you

Whenever I've taught the use of *Draw* there has always been one sticking point and two means for enlightenment. The major sticking point has always been the greyed out *Style* menu. New users will insist on trying to change the colour of something without telling the program what object they are referring to.

Use select mode (it's the arrow at the bottom of *Draw*'s toolbar) and then click on the object that you want to change. Now the Style menu won't be greyed out and your chosen object will take the style you choose.

The means of enlightenment? Obviously the first is using *Help*; the second is to look through, try out and record every menu option (and its *Help* comment). You won't want to do the last as it's time consuming. In school I've set pupils the task of producing a manual for other pupils using *Paint* or *Snapper* to take pictures of the menus.

Figure II shows how they might have started this task using *Draw* (of course) to arrange the menus and include arrows to show links from one menu to another. It takes time but those pupils certainly know their way around the programs they described.

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Time for NetTime

Keith Wright probably didn't expect his *NetTime* timer program to be so popular, but simple ideas are often the best. *NetTime* opens a small window on the RISC OS desktop that shows the running time in hours, minutes and seconds since the program was started, and a cumulative time since the last manual reset to zero.

Keith, a resident of Denmark, Western Australia, wrote *NetTime* to keep track of his time online per month. Until we all get "always-on" ADSL or unmetered calls to ISP numbers that aren't always engaged, most of us still want to keep account of our surf time.

Time I logged off?

Most currently available RISC OS diallers and Internet launchers can load and run *NetTime* when modem connection is established, including *SlipDial*, *Socketeer*, *DialUp*, the ANT Suite and ArmTCP.

Clicking Menu over the window allows you to reset the count to zero and see the date of the previous reset. To stop the count at any time, click on the Quit button.

Stopping *NetTime* automatically on disconnect is a little trickier depending which dialler is in use. A small Basic program run on disconnect to send *NetTime* a task quit message would suffice where the dialler cannot do it directly. *NetTime* can be downloaded free from Keith Wright's Web site.

NetTime
www.denmarkwa.net.au/~kwright/

The smooth solution

So you've finally got an installation date for an affordable broadband connection? It might sound like science fiction for quite a few months yet but we need to examine the possibilities that ADSL, cable modems and wireless Internet are eventually going to offer.

Always-on means always vulnerable, but even with unmetered dial-up connections we're going to be staying online for longer, so we need to take steps to keep our machines to ourselves.

RISC OS itself is inherently quite secure, but its lack of USB interface for broadband ADSL modems and automatic IP address allocation (DHCP) used by most ISPs mean that these requirements must be fulfilled by some other hardware in the chain.

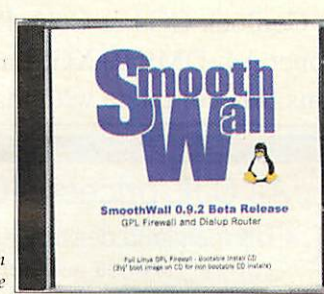
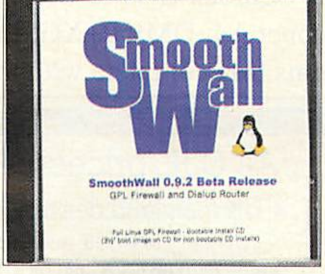
A Windows PC could do these jobs, but Windows' lack of security leaves a lot to be desired. A possible solution for a dial-up connection that can re-vitalise an older redundant 486 PC is to delete Windows from its hard disc and load SmoothWall Linux.

SmoothWall is a minimal but secure implementation of RedHat 6.2 Linux optimised into a fully-fledged dial-up router and firewall for a home or small office network.

Designed and built by Lawrence Manning and Richard Morrell assisted by a team of developers, SmoothWall is freely downloadable as a CD-ROM image ready for burning.

The SmoothWall developers are also working on a direct connect version. You can find out more about SmoothWall at **www.smoothwall.org**.

The recently released Linux drivers for the BT/Alcatel USB ADSL modem will greatly assist the use of a Linux box as a cheap and secure ADSL router and firewall. These drivers are now available from **www.alcateldsl.com**

That penguin gets everywhere

In brief

Frustrated? Join up

The UK ISP User Group is a non-profit organisation formed to support users of Internet Service Providers in the UK. Following recent troubles the UK ISP User Group offers free, impartial and independent help, advice and information.

A fair-deal code of practice for users and ISPs has been formulated so check out their discussion forums, ISP reviews, beginners resources and links to free (PC) downloads.

The UK ISP User Group
www.ukispusersgroup.co.uk

Google-eyed Deja

Troubled Usenet archiver Deja.com's newsgroup discussion service has been acquired (or rescued) by Webby-award winning search-engine company Google Inc.

Google are not using the classic Dejanews graphic front-end and many users are aghast at the change, preferring the previous system capable of both wide and narrow searches.

Google Inc. say that the new Deja interface will be soon developed and improved, with the increased efficiency and speed Google users enjoy.

Google Beta Groups
http://groups.google.com/advanced_group_search

Fellowship of the Ring

The Acorn Web ring, a linked list of Acorn and RISC OS interest Web sites using the webring.org system was started by Dave Horman. Yahoo have now taken over webring.org but introduced corporate red tape.

To break free, Paul Vigay has written his own cgi WebRing system for vigay.com and transferred all existing Acorn links from Yahoo. Each ring site owner adds an HTML code fragment to navigate the ring. Join the one ring to rule them all.

The Acorn Web Ring
www.vigay.com/cgi-bin/webring?ring=riscos

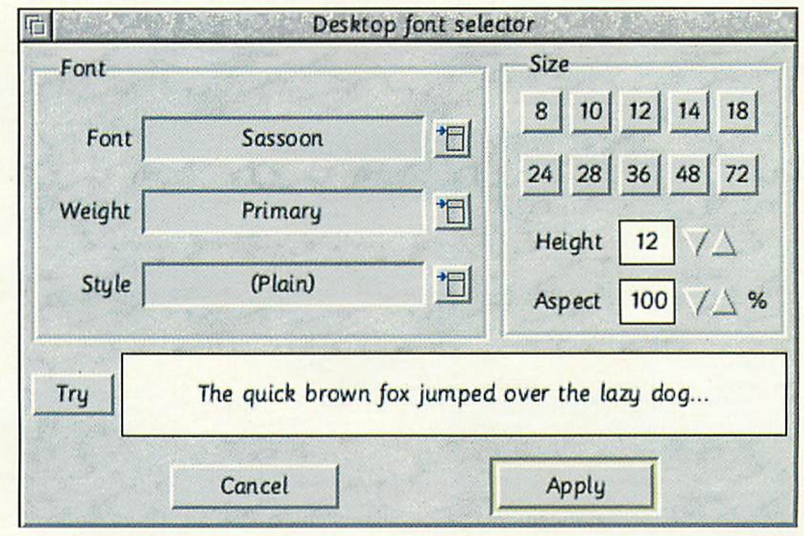
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Many varied fonts

If you like viewing your RISC OS desktop using one of the many varied fonts available (such as those available from Harry Decker's excellent emporium at **http://fonts.iconbar.com**) then *WimpFont* by Henry Morgan is a useful addition to your utility collection.

It even includes some features that I'd never discovered before, such as being able to change the actual size of the desktop font. Although *WimpFont* is quite old now — the version I downloaded from **http://members.xoom.com/Nigels_Place/software/index.html** is dated 17th March 1996 — it works seamlessly with RISC OS 4.03 and Kinetic, so should work on any version of RISC OS from 3 up.



As you can see from the screenshot, *WimpFont* displays a standardised font selection window from which you can select the base font, it's weight and style. You can also select from a variety of preset sizes or enter your own — although things start looking decidedly weird if you select anything bigger than around 18pt.

A handy preview pane lets you actually try out your settings to see if you like them before you click 'Apply' in order to activate the changes, which interactively updates the desktop with the new values.

Everything is operated from the main control window, so it's easy to use and does exactly what it claims, in a neat and simple fashion.

Six monitors in one

DeskSpace is another of those virtual desktop utilities which allow you to pretend that your desktop is much larger than it actually is — which is much cheaper than having six monitors attached, even if RISC OS were capable of splitting portions of the screen between multiple monitors like MacOS.

As has been mentioned in previous columns, there are quite a few 'virtual desktop' utilities available for RISC OS. I've added links to all the ones I've discovered at **www.riscos.org/links.html** but there's sure to be one to cater for individual preference.

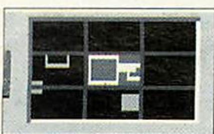
DeskSpace is written by James Allderidge and available from his Web site at **www.mirror.ac.uk/collections/hensa-micros/local/riscos/windows/** and is a minimalised application which simply displays a small panel on the icon bar, split into a grid which, by default, is three screens wide by three screens high.

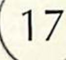
A tiny version of any window you have open is shown in each of the 'virtual desktop' panels. To switch to one of them just click on the panel you require and the relevant desktop will instantly be displayed, along with any windows you left there from the last time you worked on this desktop.

DeskSpace will also switch Desktop automatically as soon as the mouse pointer reaches the side of the screen. This can be slightly disconcerting at first because you generally expect the mouse to stop there. Instead the neighbouring desktop will be shown and the pointer will jump to the other side of the screen.

You need to imagine that your desktop is now nine times the size of the screen and that you're merely seeing a small fraction of it. Ideal if you, like me, often wish you have a 46" monitor with about 30 active windows on the screen!

There are quite a few configuration options allowing you to set the size of the virtual desktop as well as the action of various windows and so on. Support is provided for interactive help as well.


It's a very little icon but a very big Desktop



Top Twenty Links:
(Courtesy of www.riscos.org)

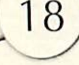
No.	Description
1	Yass2 - 'Yet Another Screen Saver': says it all really , by Ian Palmer Homepage: Status: Freeware
2	FreeNet - Freeware TCP/IP stack Homepage: http://www.compton.demon.co.uk/freenet/ Status: ?
3	ChangeFSI RC - a new version of Acorn's image processing program - converts sprites to JPEG and just about anything to sprites, by Acorn Homepage: http://www.arsvcs.demon.co.uk/webster/download/ Status: Freeware
4	Citation - A bibliography manger for handling the references in scientific and technical papers. Incorporates the features of Endnote and Papyrus with the useful drag-and-drop of RISCOS., by Dr.Tim Dawson Homepage: http://www.darwin.u-net.com Status: Shareware
5	VideoPlus - converts VideoPlus codes into times and dates and vice vers, by James MacDonald Homepage: http://www.netbook.demon.co.uk/ Status: Freeware
6	ArcLynx - RISC OS port of the text based web browser Lynx, by Andrew Wood Homepage: http://www.cus.umist.ac.uk/~ivarch/acorn.html Status: ?
7	VProtect - Latest virus protection module, by Pineapple Software Homepage: http://www.pineaple.demon.co.uk/instv.zip Status: ?
8	NeoPocott - A Neo Geo Pocket emulator, by David McEwen Homepage: http://neopocott.emuunlim.com/index.html Status: Freeware
9	VideoPlus - RISC OS port of the DOS VideoPlus codec, by James MacDonald Homepage: http://www.netbook.demon.co.uk/ Status: ?
10	WavEdit - A disk based WAV format sample editor, by Robert Hancox Homepage: http://www.tophole.freeserve.co.uk/software/wav.htm Status: ?
11	GraphWorks - User-friendly interface to graph-plotting program with numerous options., by Aurelien Botman Homepage: http://www.srcf.ucam.org/~ab384/graph.html Status: Freeware
12	DigitalCD - http://www.geocities.com/SiliconValley/Horizon/4471/dev.htm, by A desktop music player for RISC OS Homepage: So Status: ?
13	MP3Radio - A RISC OS client for playing internet radio stations using audio MPEG streams, by Philip Hardy Homepage: http://www.philspages.co.uk/downloads.htm Status: Freeware
14	FTPc - GUI FTP client for RISC OS, by Colin Granville Homepage: http://www.ftpc.iconbar.com/ Status: ?
15	Flash - A slightly improved version of Leo's Flash player, by Henrik Pederson. Homepage: http://login.dknet.dk/~henrik/ Status: ?
16	Zap - Arguably the best RISC OS text editor (well, it's my favourite!), by Mixed Homepage: http://www.zap.uk.eu.org/ Status: ?
17	POPstar2 - Improved version of POPstar, by Joseph Heenan Homepage: http://www.ping.demon.co.uk/acorn/ Status: ?
18	ArcWeb - The best freebie web browser for Acorn machines., by Stewart Brodie Homepage: http://louis.ecs.soton.ac.uk/~snb94r/arcweb/arcweb.html Status: ?
19	Acorn files - Various 'official' Acorn patches and updates., by Acorn Homepage: http://www.acorn.co.uk/ftp/riscos/releases/ Status: ?
20	Acornet - A freeware internet suite for RISC OS, including all you need to get online, by Various authors Homepage: ftp://freenet.barnet.ac.uk/pub/Acorn/acornet/ Status: ?

Quick on the Draw

If you're looking for useful add-ons and utilities to *Draw*, a browse around Rosemary Miskin's extensive Web site at **www.argonet.co.uk/users/miskin/** is well worth it. An excellent time-saving utility is *DrawLots*, which will vastly simplify making geometric shapes within *Draw*.

If you've often spent ages trying to create a regular curve, spiral, polygon, star or triangle, then *DrawLots* will be a blessing for you. Everything is controlled via a single configuration window.

There are four main sections for curves, 4-sided shapes, triangles and other designs. Each of these contains up to ten sub-shapes and each of these allows you to enter individual parameters such as the number of individual points, angles or sides and so on. In all, there are hundreds of possibilities for you to experiment with.



Once you've set the various options you require, clicking on the 'Save' icon pops up a standard save dialogue box from which you can save a standard drawfile. This can be directly into an application such as *Impression* or *OvationPro* or you can drop into *Draw* for further processing or to merge with an existing design.



Web vectoring

Another simple to use and very useful utility which doesn't require much in the way of complicated description. *Draw2SVG* is exactly as it says; A utility that will convert RISC OS drawfiles into SVG files.

For the puzzled, SVG stands for Scalable Vector Graphics and is a new and upcoming standard vector graphics format primarily designed for Web pages. Of course, RISC OS users of Browse and Fresco have been able to view embedded drawfiles on Web pages, while PC users just saw a blank space. A taste of their own medicine many would claim. However, SVG looks like it is starting to catch on and it has many benefits.

Like Draw, diagrams can be rescaled to whatever size you like, without losing any of the original quality or becoming pixelated. They're also script-based, which means that if you understand XML (eXtended Markup Language) you could in theory, edit the files by hand using nothing but a text editor (not for the faint-hearted though).

Until now that was pretty much the only way you could create SVG graphics on a RISC OS machine, even though Warm Silence Software have produced a standard browser plug-in which allows RISC OS Web browsers to view them. However, Steven Simpson has come to the rescue with this very useful application.

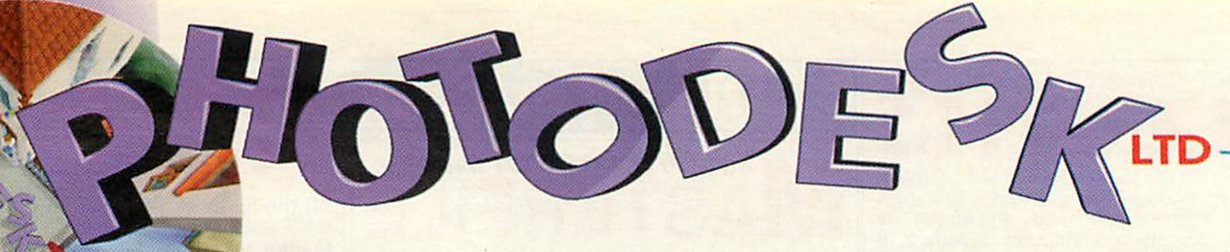
It essentially comes in two parts; a command line driven module which does the actual hard work of converting the file, and a simple-to-use front-end which allows you to drag your drawfile onto an iconbar icon which will subsequently open a 'save as SVG' window from which you can drag the resulting SVG file in the usual RISC OS fashion.

There are a few options for the more advanced user, but in reality the default options work well and I've now converted over 500 drawfiles on my Web site, so that even people browsing the Web with lesser machines can view my graphics.

Draw2SVG is available from Steven's Web site at: **www.comp.lancs.ac.uk/computing/users/ss/software/draw2svg.html**

Contacting AU

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OHP is a screen-based presentation package for use with RISC OS computers

OHP lets you compile Presentations comprised of a number of graphics files, which you create or purchase outside OHP, and show them on your computer's VDU as a full-screen presentation. OHP has facilities to order the graphics, give them consistent styling, add sound effects and help you present them to an audience. If you have access to an electronic projector, you can use that to project the presentation onto a screen.

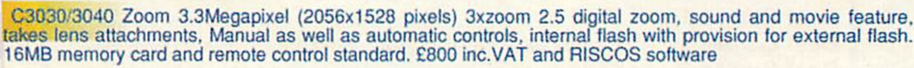
The read-only version, OHP_Show (which is Freeware) can be given away with your presentations or used on any number of computers; this makes OHP presentations an ideal way of communicating or advertising.



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Graphicality

John Cartmell covers the current and future graphics scene for RISC OS

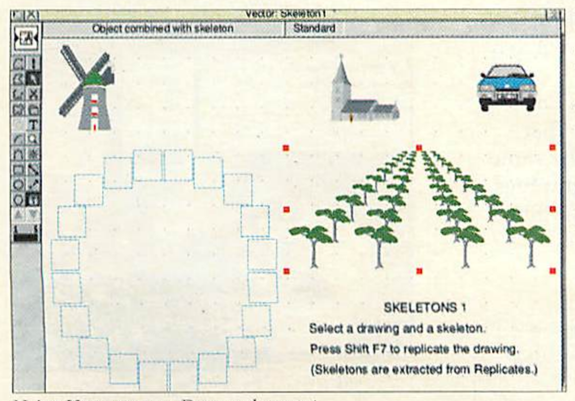
We're at a particularly interesting time for graphics on our RISC OS machines. *Vantage* is about to be released; Martin Würthner has returned to work on modules for *ArtWorks*; Cerilica has taken over publication of *TopModel*; *ProCAD* and *RiscCAD* are being developed and promoted afresh and *Composition* has acquired a whole new concept for use. And that's just among the major applications.

We've tried to make sense of the range of graphics applications and utilities but the field is far too wide to cover adequately in just one issue of *Acorn User*. We hope that wherever we have missed your favourite program, or even a whole section, you will write or e-mail **graphics@acornuser.com** so that we can ensure that it is covered in a future issue of *Acorn User* and of course the monthly graphics column will continue to produce short reviews, tutorials, news and comment.

Vector Graphics

There are two distinct means of defining a graphic on a computer: vector graphics like *Draw* and bit-mapped graphics such as *Paint*. We'll deal with the former first.

The centre-piece of RISC OS graphics has to be *Draw*. Its presence on all RISC OS machines and its capabilities make it unique. It can be used by Primary children and is used by post-graduates illustrating their work. many other programs use the drawfile format either directly, to export results from the application, or indirectly, as a format modified with additional options.



Using Vector as your Draw replacement

DrawWorks (New Millennium, iSV; also available cut-down as DrawWorks SE)
Draw does have its limitations. My main complaints are that it insists on using the unscalable and ugly system font as default and the problem that most users don't explore the menus to find all the possibilities of the program.

DrawWorks rectifies these problems by allowing the user to set the defaults and providing a button bar for most of (all?) *Draw*'s options. In its latest version *DrawWorks* adds a very wide range of tools to draw including colour selection and manipulation; customisable shape modification; additional import and export options and an extension of the tool bar to facilitate loading any other application.

DrawPlus (Jonathan Marten, PD)
Draw+ was originally conceived as a replacement for *Draw* itself. Its main additions to *Draw* are layers and libraries. With layers, complex drawings can be produced with the aid of a template that can be removed later; or drawings can be produced without the distractions of other layers that can be revealed later.

It's also suited for production of the various stages of a storyboard. using layers any combination of layers can be made and printed out without actually deleting the other layers. Libraries allow collections of clip-art (generally small sub-units of a final piece of art) to be collected together and any one pasted onto the page at the click of a button. One favourite use of libraries is for storing electronic, pneumatic or architectural elements for one-click insertion into circuit drawings and so on.

Vector (Jonathan Marten, 4Mation)
Vector is an extension of *DrawPlus* by the same author. Its main addition to *Draw+* is its ability to copy elements in a variety of positions and sizes without unduly increasing the size of the file. *Vector* is supplied with the upgrade to RISC OS 4 and the manual can be purchased from 4Mation for £10.

ArtWorks (Computer Concepts)
ArtWorks Modules (Martin Würthner)
Until recently *ArtWorks* was the big vector graphics application for RISC OS machines. Despite its age it is still eminently suitable for commercial use but really needs some (or all) of the modules produced by Martin Würthner. With Martin's modules ArtWorks can produce a very wide range of effects as can be seen in the review elsewhere in the magazine.

Vantage (Cerilica)
Vantage is the latest addition to this group and is aiming to be the very best. Although technically it hasn't been released yet it has been released in a preview version that is now close to the complete product. *Vantage* is aimed at serious users though it is certainly accessible to anyone.

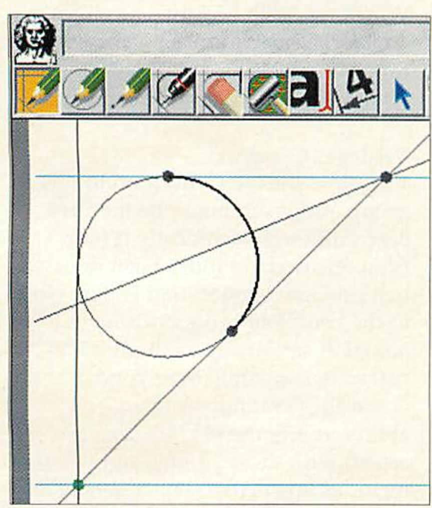
Cerilica emphasises *Vantage*'s ability to link the colours seen on screen with those printed out. *Vantage* includes layers (like *Vector*, *DrawPlus* and *ArtWorks*) but uses a system of

Compo has amazing new capabilities

families which makes the use of layers more flexible. There is far more control over production of shapes and control in the process of design and Cerilica are producing a program which will allow production of a graphics-based (multiple page) document rather than simple page production. we expect to return to *Vantage* again in the next few months as version 0.98 and v1.00 are released.

Bit-mapped graphics

Like *Draw*, *Paint* is included with every RISC OS machine. Unlike *Draw, Paint* is a more restricted program. It is excellent for producing and manipulating the icons that are included with every application. Despite its limitations very few users make the most of *Paint* and it's worth investigating all its options before moving up to commercial applications. One hidden, but very handy, use is *Paint*'s ability to take a snapshot of any portion of the screen.



Apollonius has a simple but effective interface

Snapper (David Pilling)
A utility, included here because it takes a snapshot like Paint but extends the options to make it an essential tool for anyone producing tutorials (or illustrations for *Acorn User*).

ImageMaster (David Pilling)
ImageMaster is probably the most undervalued program after *Draw*. It is sold, and used, as a program to control a scanner. Underneath that is an application that can import and export bit-mapped graphics in a wide variety of formats and manipulate those graphics to produce numerous effects.

ProArtisan (Frank Dart & Jon Warmisham, Clares)
For the traditional artist this is probably the best art program. Jon was teaching Art at the time he wrote the program with Frank and the link to an artist with charcoal, chalk or brush in hand is obvious. Although it's no longer being updated by the program authors it is still supported by Clares.

Composition (Rob Davison, Clares)
While *ProArtisan* expects you to commence with a blank canvas (though you can start with any graphic including a photograph) *Composition* expects you to start with an image but you could begin with a blank page. *Compo,* as it's affectionately called, is designed to allow you to combine bit-mapped images and edit them including effects such as adding shadows to a mixed composition.

Recent improvements to *Compo* include a scripting language that allows the user to produce the same set of effects on a group of graphics (and much more — the possibilities are only just being explored).

PhotoDesk (PhotoDesk)
Like *Compo, PhotoDesk* is designed for use on pre-existing images but has some of the artist options of *ProArtisan*. The overall feeling is of an artist with airbrush in hand rather than more traditional tools. In addition *PhotoDesk* includes a range of effects that can be applied to a picture.

CAD

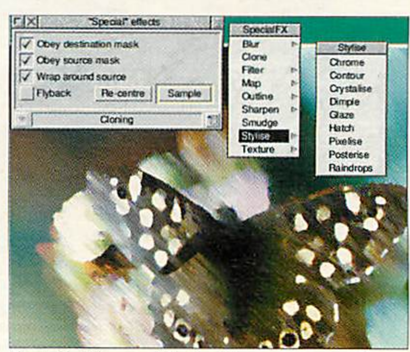
Computer Aided Design programs are Vector Graphics programs with specialist options. Engineers, architects and the like will need these options although some of them are already available in the Vector Graphics programs described above.

Put simply, the CAD programs are used where a drawing board was used in the past — although today's designer has far more tools available than the traditional draughtsman.

ProCAD (David Snell)
ProCAD (and *ProCAD lite* — previously CADet) have recently been taken back from Minerva by its author and updated. We have a special feature on *ProCAD* in this issue and next month too. Demonstration versions are available.

RiscCAD (David Buck)
RiscCAD has just been released by its author and is to be sold by an established RISC OS publisher.

Apollonius (Dial Solutions, Tony Cheal)
This is not a traditional CAD program but is a Parametric Design Tool. It has a very lean interface — unlike the other CAD programs described above. Using mathematical and draughting styles *Apollonius* can



PhotoDesk is one of the best image processors for RISC OS

ImageMaster provides many image manipulation functions

produce dynamic drawings that can be moved and amended according to the mechanics of the system designed. Apollonius is no longer advertised but may still be available from Dial Solutions.

Cabriolet (Warm Silence Software)
Works in a similar way to Apollonius but is more appropriate for mathematical demonstrations of geometry than as a CAD program.

Montage (Really Good Software Company, Michael Rozdoba)
Montage allows you to produce fractals and model real objects using an iterated function system. It can simply be used as a means of producing fractal art or to examine the mathematics behind fractals.

Reptile (G Atkinson, Kudliansoft)
Versatile (Dial Solutions)
In different ways these programs produce tiling and although aimed at the educational market are useful for anyone producing tesselating designs.

3D Vector Graphics

The applications discussed so far have been limited to two dimensions, although even *Draw* can produce an isometric view of an object. This section introduces the third dimension.

Top Model (Cerilica)
Two 3-D applications were initially released at about the same time. The one from an Italian programmer was named *Top Model*. The one from Devon was named *da Vinci*! *Top Model* has recently been taken over by Cerilica and is to be re-released soon. *Acorn User* will be looking at the revamped Top Model as soon as we can obtain a copy.

da Vinci, Tabs+, Architech (Aspex Software)
A range of programs to produce 3-dimensional vector graphics including shading, texture and lighting effects. *ArchiTech* allows simple animation and walkpaths and output (like Tabs+) as a net of the object to print, cut-out and construct the model. *Spex+* from the same company is marketed as a program for education and allows objects from *ArchiTech* to be placed on a plan and viewed in 3D.

Euclid (Dial Solutions)
This is an early 3D program that has taken on a new lease of life because of the speed of the new RISC OS computers. It is possible to manipulate a 3D picture of an aeroplane and tumble it round with a mouse — using an A3000. Although it's much more limited than later products it may be possible to obtain a copy very cheaply.

Any sort of grid you like with GridPro

WebFX3D (DanSoft)
Produces a 3D image of text with a variety of effects including different materials and lighting sources as well as animated camera positions. Masses of options and very clever.

Utilities

Draw Lots, Draw Rotate, Spiro Draw, Split Draw (Rosemary Miskin, PD)
Four utilities from Rosemary Miskin that no-one should be without. *DrawLots* produces drawfiles of many objects that you would have problems producing from scratch and allows you to choose the object's dimensions and, for example, number of cogs in a gearwheel. *DrawRotate* manipulates a Draw object and produces multiple copies in an ellipse with whatever rotation added.

SpiroDraw is an electronic spirograph. *SplitDraw* allows large drawfiles to be split into a number of pages for printing. Incidentally if you want the same function for any file (not just *Draw*) the commercial program *QuickTile* from DeskTop Projects will do the job.

Round Box (David Pilling)
It's very easy to produce a rectangle with corners if you have *ArtWorks* or *Vantage*. If not *RoundBox* will do the job.
Grid Pro (Jonathan Marten, 4Mation)
Produces graph paper and much, much else.
Perspective (Robert Seago, PD)
A simple aid to producing drawfiles in perspective.
GraphPaper (Victor Markwart, PD)
Just graph paper but rectangular, polar, linear and log. And free.
DiagramIt (Dalriada)
Produces connected shapes with text for programming and organisational charts and the like.

Conversion

There are numerous utilities that allow you to change a graphic in one format to another format. The major applications include *ImageMaster* (mentioned above) and:
Trace (David Pilling)
Traces a Sprite (Paint format) image and produces a drawfile (also

You cn do a lot with text using something like FontFX

included in *DrawWorks*).

ChangeFSI
Allows you to rescale, process and change the number of colours in a bit-mapped image, converting from many non-RISC OS formats to sprite and, in later versions, JPEG.

ImageFS2 (Alternative Publishing)
Provides automatic conversion of bitmap files, integrates seamlessly with the Filer allowing non-RISC OS bitmaps to be loaded as sprites. Can also do some vector format file types.

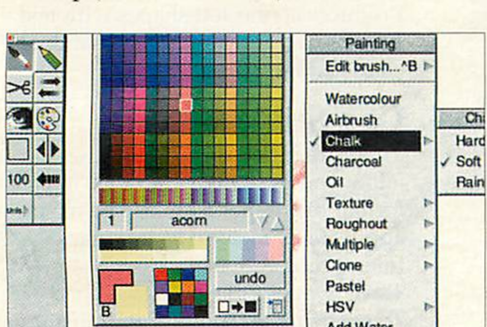
Creator & Translator (John Kortink, Shareware)
Between them these can view, process and convert a wide variety of bit-mapped images to and from Sprite format.

Image storage

There are two ways of keeping track of images and both require work on your part. They need to be labelled and organised.

Easy Clip (R-comp)
Produces thumbnails of your images from wherever they happen to be and lets you organise the thumbnails inside *EasyClip* so that the filing system is independent of the filing of the originals but these can be accessed when required.

Thump (Rick Hudson PD)
Does not produce a special set of images but generates the images on the fly as you browse the RISC OS Filer window (showing only graphics). *Thump* allows you to add captions and keywords to images and do simple searches on the database.



ProArtisan demonstrates its background as an artist's tool

Clip Art

It's impossible to give a short guide to the clip-art available. Most collections for PCs can be converted by one or more of the programs described above but there are special considerations for vector graphics. In general PC vector graphic clip art is poor and much that is available in Draw format has been converted from PC files.

The best are those that allow you to ungroup the elements in the file and easily amend the graphic. Some of the best for this are: **Topic Art** from Desktop Projects containing images in *Artworks* and *Draw* format; and **SEMERC Treasure Chest** from Granada Learning/SEMERC for schools but including the best sectional drawing of a castle.

Tutorials

All programs of any reasonable complexity can be improved with a good tutorial. The best we've encountered is one produced for *Draw* by Tom Beeley and now available on CD from APDL. There's an extract from Tom's tutorial on our CD this month.

Program your drawfiles

It is possible to produce drawfiles directly from Basic instructions and Joe Taylor has produced an extension to Basic to facilitate this task. *DrawScript* (originally *DrawBasic*) is available from **http://drawscript.cjb.net/**

Text messages

As well as *WebFX3D* mentioned above there are a number of utilities designed to manipulate text in two dimensions including:

FontFX (The DataStore)
Which is possibly the simplest program to use and produces script in circles, vertically, jiggled and as a stencil (among others).

TypeStudio
Originally from Beebug but now being re-written with another RISC OS publisher.

Animation

Finally a thought about getting your graphics to move. Animation has already been mentioned under 3D graphics but the following simply allow 2D movement.

Animator (Iota)
Iota have received a bad press recently because their protection system marks the hard drive as damaged — so check with them before you buy. *Animator* includes its own simple painting tools and an introduction to animation techniques. Sound can be added and the program accepts a range of formats for import and export.

Snap Happy (Dial Solutions)
Has no drawing facilities but takes a snapshot of the screen — allowing you to use any drawing or painting facilities. Editing is limited to deleting frames from the end but the program is quick and easy to use and get the idea of animation.

DrawAnim (Rosemary Miskin, PD)
EasyAnim (Nicholas Marriott, PD)
Two free programs that tackle the idea of animation in different ways and appropriate for learning the ideas of animation.

Rephorm (Oak Solutions)
Take two graphics and automatically change one into the other in as many steps as you like saving it as a film, your basic morphing tool. Remember when morphing was new?

Summary

So there you have it, an amazing collection of excellent tools for graphics. Not only that but, unlike some other platforms we could mention, nearly everything will let you save your files in one of the two standard file types: drawfile and sprite.

END

Design it yourself

David Rutten explains how to make your desktop prettier

Even though RISC OS has a very professional look due to the distinguished textured window and menu backgrounds, the anti-aliased font engine and the unsurpassed speed at which the WIMP works, there is still one problem. It has been a problem from day one and it's still among us. Icon sprites. You know, those little things that fill up your windows. Take a closer look, you see, they're ugly.

Chances are you belong to the group of people who feel that functionality is far more important than design. Because if you felt that design is more important than functionality, you would have bought an Apple. I'm also a member of the functionality group. As an architecture student I have to be, but I'm also convinced that a smooth-looking desktop is an important factor in the joy of working with computers. I'm not asking for a choice between design and functionality, I think I'm entitled to both.

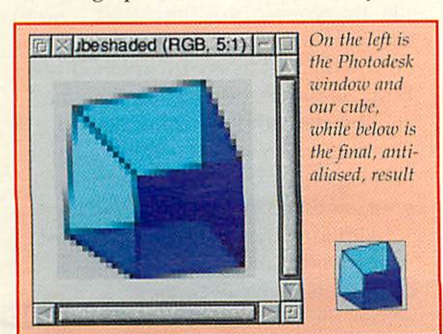
I started to surf the Internet for newer and cooler icons but *The Xperience* and *SpriteMan* were the only sites worth mentioning. How come people can write all those beautiful programs like *Imageout*, *InterGif*, *Impression*, *ImgMaster*, *IconZ2*, *Isis*, *ImageFS* and *InetSuite* (and I'm just restricting myself to the "I" list now) and supply them with such awful icons?

Well, I'm not taking it any longer. I've created over three hundred alternative icons in the past two years (and they're on the cover CD) so just in case you want to start yourself, here are some suggestions.

Probably the most important step in the design process of icons (actually in every design process) is the initial idea. If you don't have a plan, don't start drawing. It is quite logical that the icon for a program resembles in some way its purpose. And, if you'll take a closer look on your harddisc, most icons do.

However this logic will restrain you quite a bit in your creative process. I think it isn't really that important what your icon resembles, as long as it doesn't confuse people. Take *Atlanta* — it isn't really bothersome that a font manager looks like a red pyramid.

So, you've just had the idea of the century concerning icon-sprites and now you want to realise it. This is where we have to take a look at several possibilities. Although every icon is about 34 x 34 pixels (at least mine are) there are several types.



On the left is the Photodesk window and our cube, while below is the final, anti-aliased, result

Plain icons

If you took a look at your desktop a few moments ago you've probably noticed that most icon do not use anti-aliasing. This isn't necessarily a bad thing. One of the pluses of "not anti-aliased" icons is that they're usually manually created which means they can contain less colours, which means in turn they are smaller.

Another positive point is that they don't rely on the 15% grey window background as supplied standard in RISC OS. So if you decide to change your texture with something deeply red, these icons will still look OK. One of the negative points is that they start looking worse if you use lines which are not 45° or 90°. Icons like these are usually best created directly in *Paint* on a 1:1 scale.

Anti-aliasing

The first approach to creating these "cleverer" icons is quite similar to the previous one about n-a-a icon. You create the picture in *Paint*, *Draw* or *SomethingElse* at an n:1 ratio. This picture doesn't have to be anti-aliased but when it's finished you use a program like *Compo* or *Photodesk* to scale it to a 34 x 34 size.

This way you automatically anti-alias your sprite, because both programs use advanced scaling techniques such as "bi-cubic", "bi-linear" or "nearest neighbour". This means that when you scale to half of the original size, the program doesn't just delete half of the rows and columns, but it calculates the average colour.

The main problem with anti-aliased sprites is that they need the background to be something predetermined. In the standard WIMP about 15% black. (This is only of importance if you don't use masks; you could use the entire 34 x 34 pixels for the icon). So you have to work on a 15% black background from the beginning.

A different way to make A-A-icons is directly drawing in (for example) *Photodesk*. It's always smart to work with sprites which are larger than the goal-sprite. In the case of icons the work-sprites can even be 10 to 20 times bigger. This will result in a working sprite with dimensions 680 x 680 which is a perfectly acceptable size for fast pixel-editing on RISC OS. If you want to make a cube for instance with a nice perspective, the following would be a plausible way to do it:

Base lines: First construct a wireframe cube which looks nice enough to continue with. Either in *Draw* (using the isometric grid) or even directly in *Photodesk* and trust you are capable of creating a plausible perspective freehand. Or you could use *Euclid* or *TopModel*. Actual 3D editing will become imperative if you start to use more complex shapes.

Importing, exporting and editing: You can save the view as a drawfile and load it into *Photodesk*, not anti-aliased as it is usually far easier to pixel-edit non anti-aliased sprites.

Once you have the wireframe of the cube in *Photodesk* you can start colouring the sides and adding

shadows or highlights to it manually. Masks are a very useful tool in this process. Now the scaling is the only step left: scale to 34 x 34 pixels.

You should however keep in mind that you will lose all detail once you've scaled your work-sprite to the goal-sprite. Another problem with scaling, and for the same reason anti-aliasing, is that sprites get blurry or vague. There won't be really sharp edges.

It might therefore be a good idea to add sharp lines after scaling in *Paint*. But before you start on the final touch it might be a good idea to reduce your current byte-count. The sprite you've just created is 34 x 34 pixels x 16 million colours which means it's about 5K. If you transform it to a 32,000 colour sprite or even a 256 colour sprite, it's size will drastically be reduced.

Colour mutations

Usually *ChangeFSI* is good enough to transform sprites to 32,000 or 256 colours. Just select the appropriate setting in the Choices window and resave your handiwork. The problem with *ChangeFSI* though, is that sprites are saved without palette definitions. Therefore 256 colour sprites might look quite ugly.

If that's the case you may want to give *InterGIF* a shot because it has the ability to find the most common colours in your sprite and then use those to create a palette definition file which will be supplied along with your sprite. In general, there are several ways of transforming sprites.

If you decide to reduce the colour depth of a sprite to, say, 256 colours you could simply look at every pixel and replace it's 32K colour with the closest 256 colour. Although sometimes this is exactly what you want to do, in our case it's not.

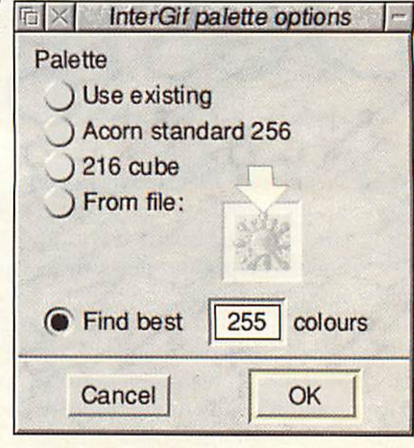
Programs like *ChangeFSI* can dither your sprites which means it looks not just at one pixel at the time, but also at the surrounding pixels. It will then try to simulate a 32K colour with a hatch of a number of 256 colours. Dithering can be done in several ways. Simple dithering, error diffusion and Floyd-Steinberg are just a few possibilities.

InterGIF can calculate a palette file which will suit your sprite best. Although it can do this for 2 to 256 colours, it is best if you only use 256 or 16 if you intend to use this sprite in the WIMP.

Although the 'median cut' option gives the best result with the lowest byte-count, one should pay attention when using it. It might confuse other programs or simply cause weird things to happen. It is therefore smart to back-up your best sprite from the entire design period.

Whether you take up the challenge to create your own sprites may depend on your graphical skill but there's no excuse for poor sprites — you can have functionality and design

InterGif provides a good selection of colour choices



if you want it. So try it.

Acorn Logo example

The following model took me about five minutes to draw in *Rhino* another five to colour and scale it in *Photodesk*. First you have to make your model (preferably in NURBS. Non Uniform Rational B-Splines or as we would call it '3D vectors') This method is better than for example polygons or voxels because the precision is more or less endless and they are easy to export to a 2D vector drawing.

After the model was completed I had *Rhino* make a 2D drawing of my current camera view and exported the result directly into *Artworks*. I changed the linewidth to 0mm because I don't want them to appear in the goal-sprite.

Next I threw it into *Photodesk* and coloured the surfaces. Scaling et voila! Ready to use goal-sprite for whatever purpose you want...

Conclusion

Personally I'm not very fond of conclusions because they mark the point where you stop thinking. But in this case one might be considered functional. I've tried to explain how I make icon-sprites in the past few words. If you feel you've learned anything from my story I would be very glad.

But if you're already doing things like this you've probably manufactured your own methods. And who am I to say my method is best? So please, don't just follow me step by step but keep thinking and creating with your own knowledge and experience. Just don't restrict yourself to Acorn machines.

Although they are by far the most user-friendly and professional computers I have ever come across, they can still be better. END

Extra acornial intelligence

Those of us who work with 3D objects have figured out for ourselves that this is one of RISC OS's less developed fields (to put it nicely). *Euclid* has a very nice editing-philosophy but was probably used by Noah when he designed his Arch... *Topmodel*, which is the most advanced program on our platform, just can't compete with Apple and Windows 3D modellers.

Even if it did support boolean operations, it would still lack too many functions to be considered a proper CAD/CAM program. My university makes me use *AutoCAD* and *Maya*, but I wouldn't recommend them.

If you own a Windows PC I suggest you downloaded a trial version of *Rhinoceros*. I find it to be an excellent 3D and 2D CAD program which works perfectly together with *Artworks* and therefore probably *Vantage* as well, through the Adobe Illustrator file format exchange.

More complex models with double surfaces or just more complex models in general are easy to create and then easy to import into *Artworks*. You could, of course, decide to render your model directly, but I usually get a better result when editing it manually afterwards.

Clares Globe

Virtualise Demo available

is a general purpose virtual memory system for the Acorn Risc PC.

What is virtual memory ?
Normally, you are limited by the amount of RAM (Random Access Memory) in your computer. Virtual memory allows programs to use hard disc space to supplement the memory available. Virtualise allows the use of up to 256Mb per application. The cost of that much RAM would be prohibitive, Virtualise normally costs a mere £24.95.

Virtual memory page status

0MB
1MB

Update | &102 | Publisher Plus data

Dynamic areas

Name	Number	Maximum	Logical	Physical	VM
ChangeFSI sprite	&108	16384K	52K	52K	Yes
Compo canvas	&104	262144K	1540K	1540K	No
Compo vignette	&106	65536K	8K	8K	No
Font cache	&4	34816K	1020K	1020K	No
Free pool	&6	34816K	14024K	14024K	No
Module area	&1	11264K	2820K	2820K	No
Publisher Plus data	&102	34816K	1008K	0K	Yes
Publisher Plus data	&105	34816K	7620K	7620K	No

How does it work ?
Virtualise works with most applications which use dynamic areas on the Risc Pc. We provide a front end so you can choose which applications you want to use virtual memory, and control its use. It isn't necessary for an application to be specially written to take advantage of Virtualise. Of course an application that is written to specifically make use of Virtualise will have performance and interface gains.

What does it work with?
We are compiling a list of Virtualise compatible software. Please contact us for a copy. Naturally, our own graphics software for the Risc Pc supports Virtualise.

£10.00 inc VAT

Look for this logo which means an application is compatible with Virtualise



Composition Demo available

is a totally new type of application for the Risc PC. It is a program for combining and manipulating bit image and vector files to produce high quality graphical page layouts. As well as the standard files you can also import Kodak PhotoCD images, Draw, ArtWorks, JPEG TIFF, Photoshop etc.



Images can be moved at any stage - yes, even the bit mapped graphics. The images can be overlaid, merged & mixed.

A powerful masking tool allows for Blend, Tint, Shadow, Displacement & Curve masks.



A comprehensive Text tool enables you to create high quality text with true adaptive anti-aliasing **and** all of the above effects or you can tag the text to print at the resolution of the printer or typesetter. There are tools for lightening or darkening, altering the colour balance, rotating, aligning, creating your own filters... The list just goes on.
If you have a Risc PC and you want to create stunning graphical layouts then Composition is the program that you need.
This version also includes CompoScript and PCA2 Applets

£80.00 inc VAT
New low price

5Mb minimum
10Mb or Virtualise recommended



ProArtisan 24 Demo available

is the latest development in the hugely successful Artisan series. Designed exclusively for the A7000/Risc PC Series, ProArtisan 24 is a no compromise 24 bit graphics package which provides 16.7 million colours for image creation and display.

This means that the tools provided, such as chalk, water colour, pastels etc, closely mimic their natural counterparts. These brushes can also be used to render intricate Draw paths, resulting in Draw images rendered in any brush type. Add the ability to load foreign filetypes such as JPEG, TIFF, PhotoCD etc • a wide range of tools and filters • intuitive interface and you have a package which will make the most of your latent artistic talent.



ProArtisan 24 does not create a barrier between your artistic talents and the final result. Put simply, ProArtisan 24 has been designed for the artist and not the computer expert.

In purely artistic terms, ProArtisan 24 cannot be beaten... When it comes to artistic brushes and tools, there is really only one winner. ProArtisan 24 has it all...
RISC User March 1995

£60.00 inc VAT
New low price

5Mb minimum
6Mb or Virtualise recommended







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Working art

John Cartmell gets his modules in a twist

Cerilica are about to release *Vantage* and a new era will soon dawn for vector graphics on RISC OS computers. So is this the time to be looking at a ten year old graphics program? The answer is an emphatic No — and Yes. *ArtWorks* was written by Computer Concepts and can still be purchased new though no work has been done on the program by CC since it was made StrongARM compatible.

Like Computer Concepts' other major applications — the *Impression* group of DTP programs — *ArtWorks* may be old but it was ahead of its time. And, unlike *Impression*, *ArtWorks* has a lifeline. Although the program itself hasn't been upgraded, Computer Concepts built into it the option to add modules to extend its capabilities.

For a long time this option was little used — until Martin Würthner entered the scene. Martin is author of the PD programs *DiscSpace*, *GView*, *RasMol* and *XChars* — all available from his Web site. He's also responsible for the *HolyBible* study aid which is sold by ExpLAN. With such a pedigree the resultant three freeware, four shareware and twelve commercial modules might be expected to be excellent. Can they really bring *ArtWorks* into the twenty-first century?

The Freeware

Ignoring *Madness*, because it's silly, *ShowFX* displays the pointer position on the ArtWorks page and *Translate* moves an object by a fixed distance. Both are potentially very useful functions, the latter especially to produce a pair of objects positioned accurately in relation to one another.

The Shareware

AutoSave will save the ArtWorks document regularly after a fixed time and with or without a prompt. *ZoomPlus* adds additional zoom options including a history, an option to zoom to a group of objects and a range of means to quickly change from one stored magnification to another. *QuickCopy* allows you to produce copies just like tribbles (take care).

The above are part of the *QuickCopy group* which require a payment of £10 for the group. *Polygon* is also shareware and once you have paid £10 for that module you also receive *Intersect* and *Path* utilities which are commercial software.

Polygon allows you to produce regular polygons and stars. Both can be produced at the click of a button and dragged into place. The centre (X,Y) of an object can be specified as can its radius and number of sides. All the attributes can be edited at any time. In the case of stars the inner radius and angular offset can also be modified from the reasonable defaults.

Commercial modules

In addition to Polygon itself the Polygon Family group includes *Intersect* which clips shapes against each other. Martin uses the tool to produce a mock transparency effect and multi-colour text. The module comes with an 8-page tutorial that shows how to produce pattern filling, graduated transparency effect and much more. *PathUtils* simply allows control over the starting position, length and angle of a line.

Although *ArtWorks* has superior align and distribution facilities to *Draw* there are still problems with aligning text. From the AlignPlus Family (£10) *AlignPlus* allows text to be aligned with the text base line rather than the bounding box and hence ensures text looks correctly aligned.

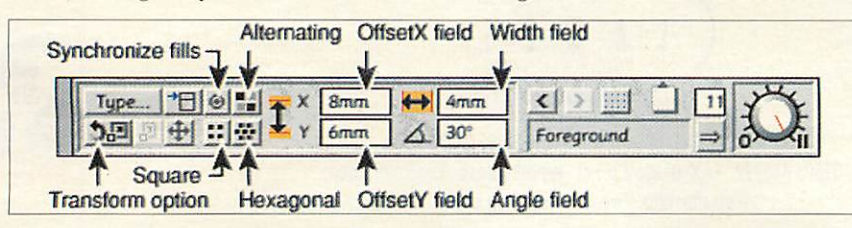
The distribute base lines allows blocks of text to be properly spaced and the pack objects option moves objects so that their bounding boxes touch without overlapping. *MRotate* and *MScale* are modules that allow you to choose multiple objects and rotate (or scale) them. Each object is transformed about its own origin but all have the same transformation applied.

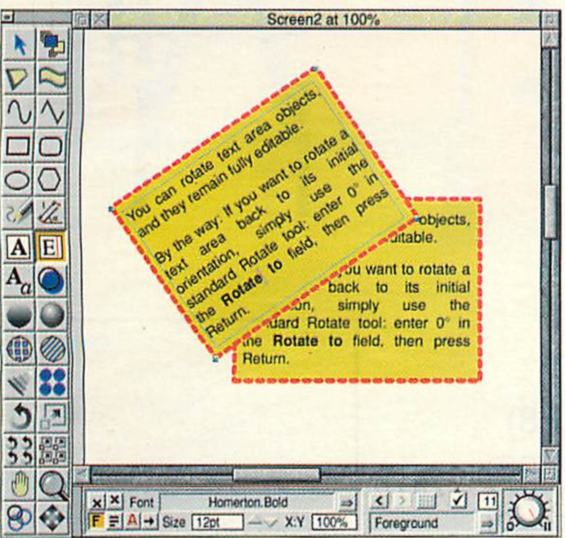
Filter (£10) is one of the most useful additions to ArtWorks. Put simply you can select objects by their type, fill style, line colour, line width, font name or font size or any mix of these. So, for example, you can choose all lines less than a particular width and then change it, make them blue, dotted, with arrows — or whatever. You could choose all closed paths with blue lines greater than 2pts with a red to green radial fill. Anything not fitting the description is deselected leaving the target object selected for you to amend as required.

For anyone (with RISC OS 3.5 or greater) who wants to illustrate a Web site *ArtWorks* is a superb design tool; except that it isn't easy to get the design in a form that is suitable. With BMExport (£15) any selection of *ArtWorks* objects can be exported as sprites or GIFs (Web suitable) with options to choose the scaling, colour depth, palette and so on — even with a browser-safe palette that should be suitable for all browsers.

Even pre-release versions of *Vantage* had grids similar to *Draw* (rectangular and isometric) and also offered circular (polar) grids. For some reason *ArtWorks* limped along with only the rectangular option. Grids (£10) brings *ArtWorks* up to the *Vantage* standard and allows the grid option to be specified.

Don't follow Martin's hint about perspective lines though — isometric grids don't produce perspective





drawings but is a quite distinct method of illustrating the third dimension. In isometric drawings all lines are the same scale (iso-metric) whereas the scale in perspective drawings is constantly changing. Perspective drawing has always been supported by ArtWorks.

Hatch (£15) adds five fill styles to ArtWorks while HatchPro (£27.50) allows you to design your own hatch styles and apply them. Simple hatch, crosshatch, chequered, spots and squares are available for both modules and hexagonal spots added to the Pro version. It's even possible to edit text that has been hatched. The Pro version allows any shape to be turned into a fill pattern and editing a style will change all objects containing that style. Shapes can be displayed in rectangular (square) or hexagonal repeating patterns.

The expansion modules are loaded into *ArtWorks* as part of the program itself and integrate so well that, after a while, one tends to forget which bits are part of the original program and which are Martin's modules. In the case of Replicate (£10) I actually forgot that I had the module — perhaps it's because its icon on the tool bar is boring — but having experimented with it recently I'm kicking myself for having forgotten about it. Replicate allows objects to be repeated without consuming any extra memory. The repeats can be made in a range of patterns and replicates can be replicated. very handy!

The latest module that has been released is TextArea (£35). It's got the biggest individual price and it's the biggest addition since, to a very large extent, it turns ArtWorks into a fully-fledged page processor with many DTP attributes.

Text has always been available in *ArtWorks* but TextArea allows multiple text columns that you can amend at any time, specification of insets and column gaps, rotating, uniform scaling and the block of text acts as a rectangle to which background and line colour, width and so on, can be added.

As a word processor *ArtWorks* with TextArea is very capable. The font, size, ratio, colour, background and super or subscript can be set. There is full control over justification as well as line and paragraph spacing. There is indent, first line indent and tab stops and even 'Keep together' and 'Force to next column'.

JPEGObject (needs at least RISC OS 3.6 or 3.5 with JPEG enabled SpriteExtend) was yet to be released as I wrote this but by the time *Acorn User* drops on your doormat this may have become the latest module.

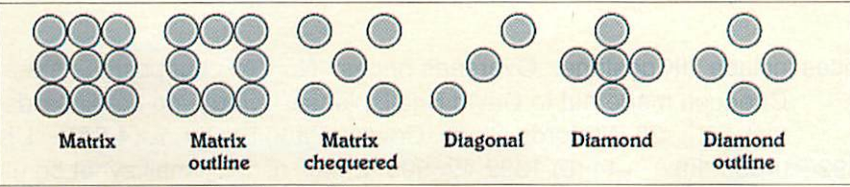
Martin has produced this latest addition to the range to allow you to embed JPEG images in *ArtWorks* files without decompressing them. This bring *ArtWorks* up to the standard of the RISC OS 3.6 *Draw*. Going further than *Draw* is its ability to rotate, flip and skew the images.

ArtWorks itself can be purchased from Computer Concepts for £99+VAT — although if you confirm that you are an *Acorn User* reader they will allow a discount of 25% on orders received before the end of April.

Martin Würthner's modules are available singly or in groups as above at the price shown and there are offers for purchasers of more modules (see below).

The overall price isn't cheap. Is it worth the cost — especially with *Vantage* just round the corner? Of course *Vantage* is expensive and the money has to be produced upfront whereas you could buy *ArtWorks* now and Martin's modules as you needed them.

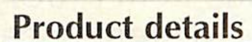
If you want the best and can afford it then you would probably want to wait to see what Vantage is like and weigh up the value of a product that is being currently developed. If you already have *ArtWorks* and don't intend buying *Vantage* I would advise looking at Martin's modules. They all work well and are all worth purchasing; how many of them you should purchase is between you and your pocket. **END**



Getting more options from the replicate module

Product details

Products:	The Classic Modules Collection (£40 — save £37.50) Align Plus group, Filter, HatchPro, Polygon Family, Quick Copy group, Replicate The Update Collection (£50 — save £10) BMExport, Grids, Text Area The New Full Set Collection (£70 — save £67.50) All the above The modules can be sent by e-mail but for standard post add £2.50 to these prices (or £5 if order includes HatchPro and a printed manual is required).
Supplier:	MW Software Martin Würthner Mannheimer Str. 18 67655 Kaiserslautern Germany
E-mail:	martin@mw-software.com
Web:	www.mw-software.com



Product details

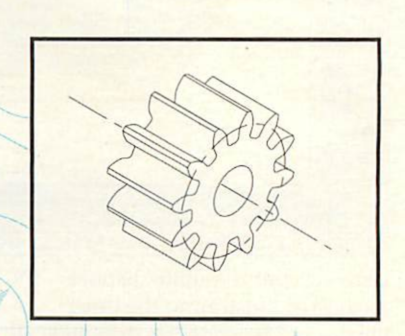
Product:	ArtWorks
Price:	£99+VAT and don't forget to ask for the 25% discount
Supplier:	Computer Concepts Ltd, Gaddesden Place, Hemel Hempstead, Herts HP2 6EX
Tel:	(+44/0) 1442 351000

ProCAD+

If your business depends on accurate technical drawings, rather than pretty pictures or photographs, then it has to be ProCAD+ - the industrial choice.



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- Single user ProCAD to single user ProCAD+ license: £85 + VAT (£99.88)
- Single user CADet to single user ProCAD+ license: £130 + VAT (152.75)
- ProCAD site license to ProCAD+ site license: £170 + VAT (£199.75)
- CADet site license to ProCAD+ site license: £260 + VAT (£305.50)



The cut-down version of ProCAD+ for students and home users.

ProCAD Lite UK Prices:

- Single user license: £85 + VAT (£99.88)
- License for up to 5 machines: £106 + VAT (£124.55)
- License for up to 10 machines: £127 + VAT (£149.23)
- License for up to 20 machines: £170 + VAT (£199.75)
- For more than 20 machines, please 'phone for a quote.
- You can upgrade from ProCAD Lite to ProCAD+ for the difference in the current prices.

Free Demo. Copies available on the January Acorn User CD or from the author's web site www.zynet.co.uk/dsnell

Prices include UK postage. Overseas prices: No VAT, but postage extra.
Cheques made out to David Snell, please. (Sorry, no credit cards)
35 Wrefords Close, Cowley Park, Exeter, EX4 5AY. UK
Tel: +44 (0) 1392 214033 Fax: +44 (0) 1392 496599 Email: dsnell@mail.zynet.co.uk

Got a Lite?

David Snell lets you into some of his ProCAD secrets

And before you set fire to my moustache, I don't smoke (though I do smoulder when I am working with a certain non-RISC OS operating system). No. The Lite I am talking about (sorry about the American-style, but very fashionable, spelling) is *ProCAD Lite*. It is a new product aimed at those who cannot justify the cost of the full *ProCAD+* package and don't really need all the bells and whistles anyway.

ProCAD and its smaller brother, *CADet*, were 2D CAD packages and came out in 1992 marketed by Minerva. In 1997 a joint marketing deal was arranged and a new product *ProCAD+* was launched by the author. *ProCAD* was at the core of it but it was greatly added to and the price reduced.

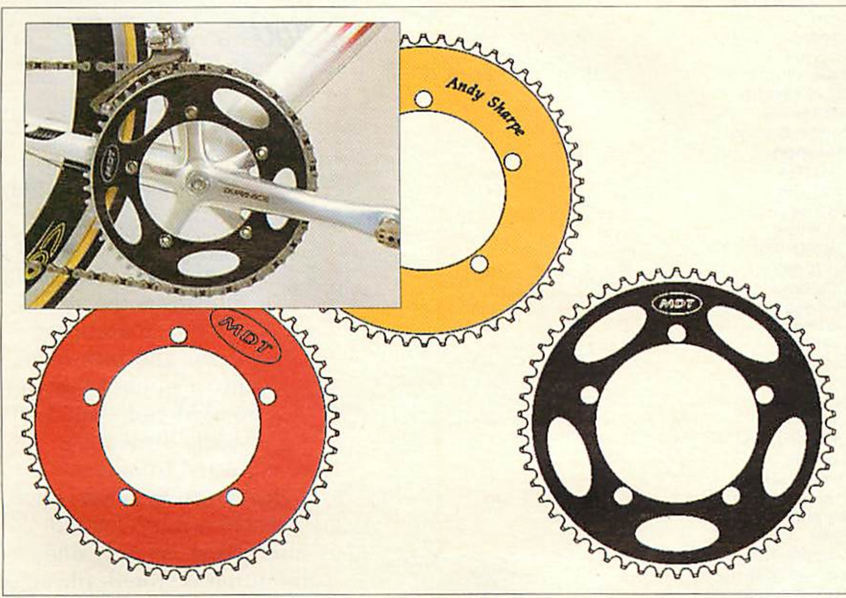
Lite's main difference from *CADet* is that it supports RISC OS outline fonts, but it does not support DXF as *CADet* did and it does not have a plotter driver. It assumes you will be using a normal printer.

What you really want to know, though, is how light is Lite? What is missing? Is it still going to be useful to me? Hopefully, the rest of this article will answer those questions.

With *ProCAD Lite*, what you see is what you get. *ProCAD+* has a whole army of functions to let you tailor the program to your own requirements, while Lite is set up ready to go. For instance, in Lite, the function keys are predefined, whereas in *ProCAD+* they may be set up to do anything you want.

Probably the most useful feature of *ProCAD* in all its forms has been the snap feature that allows you to accurately attach drawing items to each other. *ProCAD Lite* still sports the full set of snaps but does not allow them to be modified in the way the full version does. Mid-point snap, for instance is always mid-point and may not be set to other divisions as the other version allows.

The *Lite* toolbox is definitely lighter, though far from empty. All the usual geometric construction tools are there except for ellipses. Also, support for isometric projections of objects is absent, though the isometric grid is still



From ProCAD to the Olympics, the gears for the radical "Lotus" bike were designed on RISC OS

Comparison of the features of ProCAD+ and ProCAD Lite

Features	Lite	Plus
Straight lines		
Multi-vector	•	•
Single vector		•
Fixed angle		•
Fixed length		•
Free-hand	•	•
Closed	•	•
Bezier curves		
Free-hand	•	•
Closed	•	•
Rectangles		
Ways of drawing	4	6
Parallelograms		•
Isometric rectangles		•
Rotated rectangles		•
Polygons		
Ways of drawing circles	6	6
Ways of drawing circular arcs	4	5
Ways of drawing ellipses	5	6
Ways of drawing isometric circles	0	4
Elliptical arcs		•
Ways of drawing	0	6
Isometric arcs		•
Symbols (shared)	•	•
Automatic types	0	13
Enumeration types	1	15
Outline fonts	•	•
Points	•	•
Dimensions		
Types	2	13
Direction choices	2	11
Area fill		
Fill patterns	16	55
Multi-copy		
Linear		•
Circular	•	•
Object centred		•
Follow item		•
Split text		•
Fillet tool		•
Chamfer tool		•
Parallel tool		•
Geometric tool		
Extensions		•
Perpendiculars		•
Normals		•
Tangents		•
Co-Tangents		•
Angular bisectors		•
Groups	•	•
Sprites		•
Expressions for i/p	•	•
Views		
Mutiple drawings	8	16
Multiple views	16	32
New view formats	1	7
Stored views/drg	8	8
Grids		
Square/Rectangular	•	•
Isometric	•	•
Oblique	•	•
Construction lines	•	•
Colours		
Pens (user definable)	23	23
Paper sizes		
A0 to A5	•	•
Non-standard		•
Layers	256	256
Text classes	0	256
Tools on Tool bar	13	20
Snaps on Snap bar	16	16
Modifiable Snaps	0	5
X/Y projection snaps	•	•
Drawing modes		
Absolute	•	•
Relative	•	•
Polar	•	•
Undo / Redo	•	•
Find and Replace		•
Plotter driver		•
HPGL		•
HPGL/2 (and PJL)		•
Selection		
All	•	•
By item type		•
By colour		•
By layer		•
By font etc.		•
Operations		
Extrude		•
Reflect		•
Isometric copy		•
Shear/Rotate		•
Cut out to shape		•
Crop to rectangle		•
Rotate	•	•
Pivot		•
Magnify	•	•
X scale	•	•
Y scale	•	•
Line scale	•	•
Extend	•	•
Object operations		
Justify (8 ways)	•	•
Join	•	•
Move to layer	•	•
Move to text class		•
Level	•	•
Group	•	•
Ungroup	•	•
Type conversions	9	9
Bill of materials		•
File Manager		•
Symbol Manager		•
File Import		
CAD files	•	•
Draw files	•	•
DXF files		•
IGES files		•
OS NTF files		•
Sprite files		•
CSV files	•	•
Text files	•	•
File Export		
CAD files	•	•
Draw files	•	•
DXF files		•
Sprite files		•
CSV files	•	•
CNC CSV files		•
Text files		•
Desktop settings		•
Preference settings	44	83
Key Short cuts		
Fixed	•	
User definable		•
Key Functions	0	>2000
Manual pages	95	176
Discs	1	2

available. The additional tools for chamfers, fillets, parallel and other geometric constructions are not included.

One of the great features of *ProCAD* in all its forms is the ability to take a group of items and turn them into a symbol that can be used and shared on a single drawing or exported to other drawings. Symbols, once created, can be rotated and scaled. As only one definition is stored, file size savings can be made. I am

pleased to report that both versions support symbols and a sample set of various symbols is provided with each package. They are fully interchangeable between the packages.

The text tool does all you would expect of it and the enumeration feature is still there, although limited to numerics only. (The full version will handle days, months, alphabetic and several other formats.) The enumeration feature is one of those helpful extras that is not available on most other packages on any platform.

Suppose you had just drawn a 50-way edge connector and you now came to the numbering of the pins. Instead of having to go back each time to the text tool, delete the old value and replace it with the new, all you do is put as many question mark characters as you want to specify the width of the number, turn on Enumerate and go.

If just a single question mark is used the field will be expanded as needed. If more than one was supplied the remaining space is filled with leading zeros, which may be useful if you are laying down part numbers. Each time you click to position your text, the number is advanced by the amount specified and you just keep clicking until it is all done. That may be a bit tedious for the edge connector example. Do you really need 50 clicks? Don't panic. Just put 25 in the quantity field, click for the first and the second numbers and the rest will be filled in at the same spacing. Magic!

The area fill tool does not have the woodgrain effect; in fact it only has 16 types of fill to the 55 on offer from the full version, but it does have some of the mapping fills for trees, marsh land and so on, so will still appeal to the student user.

Dimensioning is limited to linear and will do for most simple purposes. For a comprehensive range of dimensioning features, only the full package will do.

The only multi-copy option available to Lite users is circular. *ProCAD+* has four options, one of which is to follow an item, so you can distribute things along a Bezier curve, for example; even text.

Files and filing

This is probably where the biggest difference in the two packages shows up. Both packages will import and export CAD files (ProCAD format), Draw files and CSV files. CSV (Comma Separated Value) files are basically text files containing coordinates and other drawing information that may have been created by another program or may be read by another program.

Both can handle text files but for Lite this is limited to importing only. *ProCAD+* goes on to import other types of file such as DXF, Binary DXF, Ordnance Survey NTF, IGES and Sprite files. It can also export as DXF, Binary DXF and Sprite files, as well as a special CSV format that traces paths for use with CNC machines.

The CAD file format used by both versions is fully interchangeable and both will even read and upgrade files from the original Minerva *ProCAD* and *CADet*. It is assumed that the Lite user will only be dealing with small numbers of simple drawing files.

ProCAD+ is the professional option and comes with a file and symbol manager that allows drawings to be carefully stored away in appropriate directories for projects and previewed in a thumb-nail window. Symbol also can be previewed in this way and selections of symbols may be extracted from libraries to be used on a drawing.

If you have access to the Internet you can download a demo copy of either package from the Web site, along with documentation to help you get started. The demo software will allow you to do everything the complete package will do, except save drawings.

If you do not have access to the internet, don't worry. You will find a demo copy on the Acorn User CD for January 2001 or you can request a demo copy of either *ProCAD+* or *ProCAD Lite* (UK readers only) .

www.zynet.co.uk/dsnell

The Future

Both *ProCAD+* and *ProCAD Lite* are being actively developed and supported and will continue to be so for the foreseeable future. I showed this article to a ProCAD+ user and he said "you do not say that ProCAD+ is in daily use by big and small industry, and I think you should. People and industries earn their livelihood with it; it is seriously time-saving, seriously profitable, quick to learn, easy to apply and good to use software." So there you are.

Using a CAD package can be quite formidable, but it doesn't have to be, so in the next issue we'll take a look at using ProCAD in a practical way. Don't forget to download the demo version and see how it works. END

ProCAD+

Single user licence	£195+VAT
Licence up to 5 machines	£245+VAT
Licence up to 10 machines:	£295+VAT
Licence up to 20 machines:	£390+VAT
For more than 20 machines:	call for quote

ProCAD lite

Single user licence	£85+VAT
Licence up to 5 machines	£106+VAT
Licence up to 10 machines	£127+VAT
Licence up to 20 machines	£170+VAT
For more than 20 machines:	call for quote

Address: 35 Wrefords Close, Cowley Park, Exeter EX4 5AY, UK
E-mail: dsnell@mail.zynet.co.uk
Tel: (+44/0) 1392 214033
Fax: (+44/0) 1392 496599
Web: www.zynet.co.uk/dsnell

Notes: You can upgrade from *ProCADlite* to *ProCAD+* for the difference in the current prices. Prices include UK mainland postage. Overseas: No VAT but postage extra please e-mail for postal rates. Cheques payable to: David Snell. Free demo available on Web site.

Different worlds

Steve Turnbull gets lost in space – and time

No sooner had I got to grips with *Elite* and *StarFighter 3000* being back on my hard disc that they had to make room for two more games from the Other Worlds collection from iSV.

Sunburst is a funny old game, it's a sort of cross between *Elite* and a scrolly 2D shoot'em up but, I think, manages to get the best from both.

The basic principle works as in *Elite*, you are a trader who can go from system to system trading and building up your credits to make your spaceship tougher — or, completely unlike *Elite* but definitely on the wish-list, even buy a completely new spaceship.

However where *Elite* has hundreds of star systems in eight galaxies, *Sunburst* has about 10 or 12 scattered over four sectors. But there's lots of space in between and much can happen, and usually does.

And where *Elite* has just a few missions to spice up the humdrum fly-dock-trade fly-dock-trade sequence, *Sunburst* is basically a long series of missions. You can trade as you travel to equip your ship to be better able to handle the increasingly difficult missions.

Launching the game runs you through a graphically nice set of starting screens which finally return you to the desktop — this is not an error. You will then notice that your iconbar has an additional icon. The brown skull of *Sunburst* (I think he got too much sun).

You can set up various play options and save the current game at any stage (unlike *Elite* where you can only save at a space station). Clicking on the iconbar icon takes you to the beginning of the game and the mission message for delivering a capsule to another station.

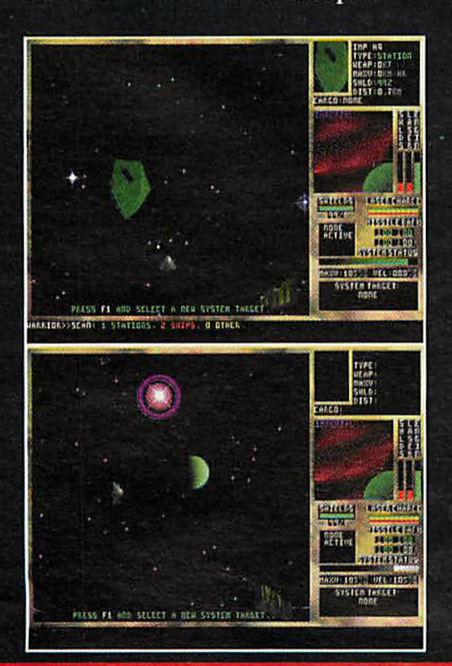
This is really a little mission to give you a feel for the navigation method which works like this: There are either two or three space stations in each of the four space sectors. Only one of these stations has the ability to create a hyperspatial jump gate to another sector.

So you have to fly from where you are to the station, request a jump gate, fly through and then fly from there to the space station you need to get to. Sounds easy, but it isn't.

Space, as a famous book once claimed, is big. Really big. You wouldn't believe how mind-bogglingly big it really is... and so on. Well in *Sunburst* space really is very very big and it's a long way between space stations. You cannot sensibly fly from one to the other without employing the jump mechanism.

Elite also has a jump mechanism but it isn't essential, merely useful to speed up the game. The *Sunburst* jump (which works in a similar way apparently) is definitely essential unless you have absolutely no life at all. You point the ship in the







direction you want to go and press 'J'.

Assuming there are no large masses in the immediate vicinity the ship speeds up and flies very very fast until it runs into an area occupied by mass — this always happens.

The masses found involve either ships fighting each other, or meteors and meteor miners. You can choose to get involved or you can let alone and fly on through hoping to get to jump distance before anyone gets interested in you.

If you do have to fight (and you will) it's usually a matter of flying round and round shooting whenever your target gets in your sights — they are shooting at you as well which can lead to feelings of "game over" if you're not careful.

The amount of energy your ship can generate can be delivered to the shields, engines or laser and you can adjust the proportions as you fly. It's a delicate balancing act figuring how to balance your engine power (hence speed) against shield and laser charging.

A feature which is unique to Sunburst is the text messages that appear at the bottom of the screen. These are supposedly the interplay between the different ships in the vicinity. Cute.

At the various space stations you can trade anything you've managed to pick up on your journeys, keep an eye on the messages you've received. Buy power-ups — like more powerful generators, very useful — or sell them, do repairs and even play a game!

I got through a couple of mission levels on Sunburst but got wiped out because I hadn't earned enough to power-up the ship enough to handle a lot of very nasty bad guys. That's life.

Air Supremacy

I admit it, I am useless at this although I think that has something to do with the speed it's running on a StrongARM. However casting my mind back to its original release in 1991 I seem to recall I wasn't much good at it then.

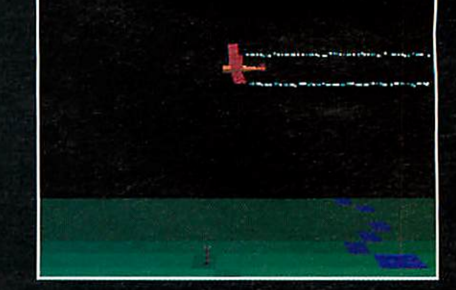
Anyway so let's see what we've got: The back story is that it's the future, the icecaps have melted and you're in training to be a fighter for your particular political group to hang on to what little reserves of Earth are left. But you are in training and when you get to Ace skill you can start doing the real thing.

What you actually get in your training is versions of combat similar to World War I, World War II and some conflict in the Middle East. Which was weirdly prescient of the author.

In the WWI scenario you get to fly a biplane or drive a tank and you can swop at one of the two runways; in WWII you get a monoplane and a gunboat; and in the next level you get a modern fighter and tank.

The graphics, apart from the linking sections, are the same code that was used for *Conqueror* and ohmigod what was it called ... name changed to *Virus* on other platforms ... well anyway, that game which originally came as a demo on early RISC OS machines.

However unlike those games the terrain in this is completely flat and I had trouble relating to it especially when flying a plane. This



is made worse by the fact that the viewpoint does not change at all. You're always looking north regardless of whether the plane is flying east, west or south. For some reason this didn't matter in *Conqueror* or that other game (which I got really good at) but here it does.

You can opt for keyboard or mouse control, mouse is horrendous and keyboard isn't much better.

To be blunt, the ground just would not be friends with me, so I don't really have a lot to say except: Can I play *Conqueror* now please?

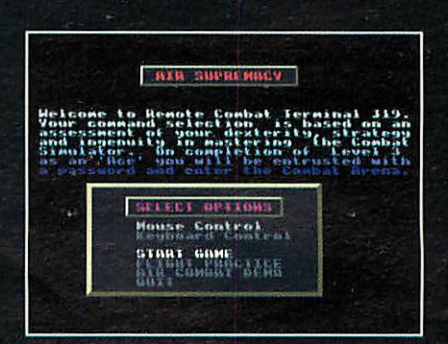
Summing up

I'm afraid I have to say that, of the four games in this collection *Air Supremacy* is, for me, the dud and could have been left off without any harm. But given that the other three are real corkers, it is a very low cost product (and someone somewhere probably likes *Air Supremacy*). I have to give this game selection 12 out of 10. Nice. END

Product details

Product:	Other Worlds
Price:	£16.50
Supplier:	iSV, 86 Turnberry, Home Farm, Bracknell, Berks, RG12 8ZH
Tel:	(+44/0) 1344 455769
Web:	www.isvproducts.co.uk







The ACORN USER Guide to RISC OS Dealers

in the UK, Europe and around the World

Times are changing and throughout the RISC OS world there is a new hope as exciting products begin to take shape and reach the market.

Exciting announcements from Pace and RISCOS Ltd mean the new age for RISC OS is almost on us. Now is the time to start considering when you'll get your next computer.

This list will give you a guide to those people who can advise you on which to buy. This is the start of something big, make sure you're in at the beginning.

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Key to box colours

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- Education dealer
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RISC OS User Groups in the UK

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Birmingham (proposed)	bham@aaug.net	Birmingham
Bottisham Acorn User Group	baug@aaug.net	Cambridge
Bristol Area User Group	barug@aaug.net	Bristol
Derbyshire Area Risc Club	darc@aaug.net	Derby
Essex Acorn User Group	eaug@aaug.net	Chelmsford
ICENI	iceni@aaug.net	Ipswich
Lincolnshire Acorn User Group	lincs@aaug.net	Spalding
Liverpool Acorn User Group	laug@aaug.net	Oxton/Southport
ROUGOL	rougol@aaug.net	London
M25 East RISC OS User Group	m25eroug@aaug.net	Harold Wood (E.London/West Essex)
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Northern Ireland Group (proposed)	damian@bmena.dnet.co.uk	Northern Ireland
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Wessex ARM User Group	wessex@aaug.net	Yeovilton,Somerset

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E: sales@liquid-silicon.com, W: www.liquid-silicon.com

Cumbria Software Systems Ltd.
Unit 3A, Townfoot Ind. Est, Brampton, Cumbria, CA8 1SW
T: 01697 73779, F: 01697 73818
E: Sales@ictlifeline.com, W: www.ictlifeline.com

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E: enquiry@co-comp.co.uk, W: www.co-comp.co.uk

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(Interfacing hardware developer)
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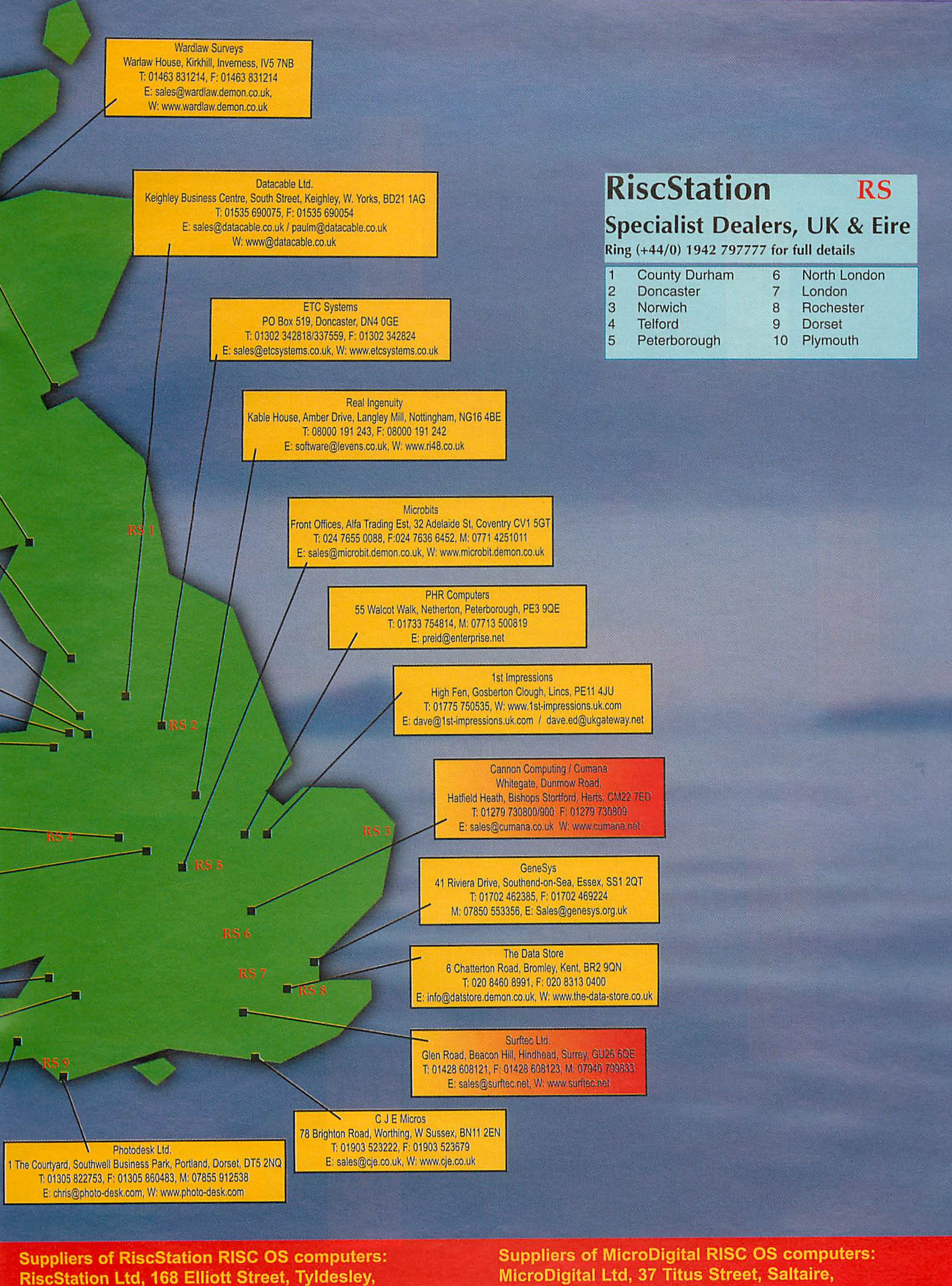
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E: sales@explan.co.uk, W: www.explan.co.uk

TME (South West) Ltd
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E: office@tme.co.uk, W: www.tme.co.uk
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Unless otherwise noted each of the dealers mentioned in this guide can advise you on which type of RISC OS computer will best suit your needs and will be able to supply it and the software you need.

Suppliers of Acorn-badged RISC OS computers:
Castle Technology Ltd, Ore Trading Estate, Woodbridge Road, Framlingham, Suffolk IP13 9LL.
T: 01728 723200, F: 0800 783 9638,
E: sales@castle.org.uk, W: www.castle.org.uk



Suppliers of RiscStation RISC OS computers:
RiscStation Ltd, 168 Elliott Street, Tyldesley, Gtr Manchester, M29 8DS.
T: 01942 797777, F: 01942 797711
E: info@riscstation.co.uk, W: www.riscstation.co.uk

Suppliers of MicroDigital RISC OS computers:
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Fonts for the memory

James Littlegarden lets you in on the best of fonty fun

What do you do when you have 71 font directories in your *!Fonts* collection and you want to add another? Give up? Delete one you don't use much? Add another *!Fonts* directory by hand? Get RISC OS 4?

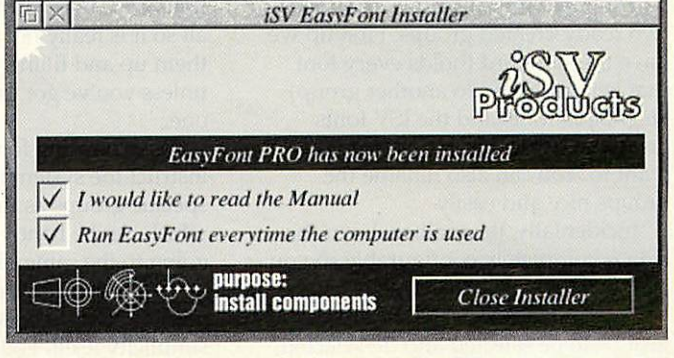
Well giving up might be your idea of a good time, but most people won't do that. Deleting another one seems a bit drastic. Maybe you're technical enough to add a directory but there is a limit to how often you can do that or just get RISC OS 4?

Since this isn't an advert for RISC OS 4 I'll tell you why that isn't an option: Menu size. Let's suppose you had 200 fonts, how long would it take to find the one you want in a scrolly font menu five times the height of the screen? Especially when you don't use most of them most of the time.

There have been several applications that aim to make handling big font lists easier but one of the survivors is *Easy Font Pro v5* which I will refer to as EFP from now on.

Currently this is supplied on CD by iSV along with Dr Fonty, 2000 fonts and *DrawWorks SE*, the free cut-back version of *DrawWorks New Millennium*.

What EFP does is allow you to take all your fonts and categorise them into groups, so you can have fonts associated in certain areas, then groups can be switched on and off making those fonts available or hidden — thus keeping the size of the menu down.

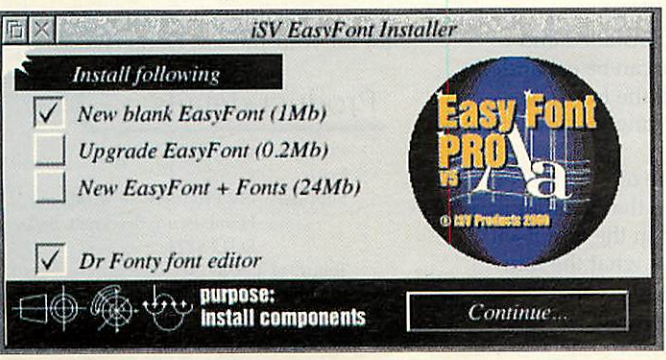


But more than that, a font can belong to more than one group, without having to duplicate the font itself so you can have lots of different groups. For example you might have one font for swirly display fonts and another for san serif display fonts. But if you've used one out of each of these in a document you can have a special group just for this type of folder.

Adding and deleting groups is easy but getting your fonts installed is perhaps the riskiest part of the whole operation.

If there's anything that I don't like about EFP is the fact that it stores the fonts in its own special way. It is a two stage thing:

First EFP does not have to store the fonts within its own structure at all, it will just store a reference to a font. Hence you can access the 2000 fonts on the CD without actually having to bring them on to your harddisc. This is a good thing and very intelligent.



The second stage is not so nice. It's this storing of fonts in its own special way if you choose to have them loaded up into EFP itself. Under normal circumstances RISC OS fonts store font families in hierarchical directories, this is convenient and logical but suffers from the tremendous amount of wasted space you get with every directory.

RISC OS 4 solves this problem to some extent and you could, maybe, compress your fonts using a standard RISC OS compression program that behaves like a filing system. EFP reorganises the fonts to save space and I just get the feeling I am losing them.

Anyway it's not too serious a problem and the system does work so perhaps I shouldn't worry. To get it going from the CD you run the install program that gives you the option of just installing EFP, upgrading an existing version, installing the extras

and/or the 2000 fonts. What you do with it is definitely up to you and your harddisc space. As an added feature you can set up the program to run every time if that's hat you need.

The main EFP window consists of two ready-created groups: First up we have the standard (holds every font that isn't assigned to another group) *Ungrouped* fonts and the ISV fonts group, which you can delete if you want to. You can also rename the groups nice and easily.

Incidentally, the toolbar down the side is completely configurable so you can choose what you want, the various buttons allow fonts and groups to be selected and de-selected, groups added and deleted, plus the selection of one of three default groups for quick selection.

The actual process of adding fonts is simple enough you select "Adding" from the iconbar icon menu. At this point you get the option to select the folder you want to search for fonts, or you can have the program search for fonts automatically. The scanning process can take a little while but when it's complete you have a complete list of the fonts on your system. From here you choose those that you want to add to the EFP system, under normal circumstances you would choose them all.

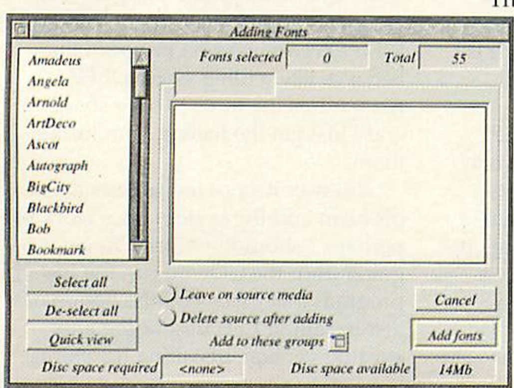
There is one important caveat at this point, you are instructed to make a back-up of all your font files. If you don't and something goes wrong you could lose them all especially if you have the "Delete source after adding" option set.

In this are you also have the option to leave the font files on the source media and only save a reference to them. This is ideal if you have a lot of fonts on CD — most won't be used at all so it is really not worth loading them up and filling up your hard disc unless you've got a really really big one.

When adding fonts you can also instruct the system to add them to specific groups as they are merged which can be handy if they are all going to the same place.

However once they are loaded up moving fonts between groups is simplicity itself. Following the Filer format all you have to do to move a font is drag it from one group to another. And, unsurprisingly, to copy a font to another group you just Shift+Drag.

Every font can be in a combination of several states, it can installed or uninstalled, shown by the radio button, which determines whether or not it is available for use by the system. It can also be selected or deselected, indicated by a tick, which sets up whether it's going to be affected by renaming, deleting and so on.



The entire groups themselves can be selected/deselected, installed/uninstalled and additionally can be expanded (showing all the fonts) or shrunk showing just the group name.

One of the nice features of the system is that the font name is displayed in the font itself which shows what the font looks like — absolutely essential if you have a lot of them to look through. The main display doesn't show the different weights available for each font but you can check these out on the main menu.

Cute tricks

One of the great ideas in EFP is that by dragging a file on to the main window the program will search through the file looking for references to fonts and will install them to ensure that when the document is loaded the fonts will all be available. It will also tell you if it can't find a font that's been mentioned.

A similar feature is that system can be set-up so that a particular file type becomes associated with a particular set of fonts and whenever that filetype is double-clicked the relevant fonts become installed.

There's a special Installed fonts window which shows the fonts that are currently available and you can save out a complete font list either as a simple text file or as a drawfile with all the trimmings showing the font itself.

There's a font viewer so that you can see what a font looks like in more detail, however using this option you can also create completely new weights for your fonts. this is a bit naughty in some ways because there is an art to font creation but it can be handy in some instances. The manual does have complete section on this describing how to use the complex facilities.

That's the general overview of EFP, there are quite a few other facilities, some utilities and Dr Fonty which I haven't even touched on so you get a lot for your money. Good choice. END

Product details

Product: Easy Font Pro v5
Price: £
Supplier: iSV Products, 86 Turnberry, Home Farm, Bracknell, Berks RG12 8ZH
Tel:01344 455769
E-mail: atimbrell@aol.com
Web: www.isvproducts.co.uk

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The more astute among you may have noticed there wasn't an article last month. I've a good excuse, honest. UltraGUI, the recently born computer interface that (by stealing the best bits from all the other interfaces) will become the very best there is, was going through teething last month.

The wee lad kept me up every night and I didn't get a wink of sleep. But it's been worth it, because instead of sprouting teeth for eating like a normal baby, he's developed menus. Useful for ordering food, so you can see how important this was.

Seriously though, menus can be one of the most important parts of any complex GUI: they provide a way for the user to issue commands to the computer. So, what are UltraGUI's menus like, and why are they the best? Two questions that will be answered in my usual round about way.

The prefered way to issue a specific command, say 'print', would be to have a nice big button (perhaps in the corner to make it infinitely large in two directions) with the word 'print' on it. Sadly, a computer screen has only so many corners, and with all the possible commands you might want to issue, the edges, then the rest of the screen would quickly be flooded in buttons.

To save space but still provide the ability to issue many commands, the commands must be hidden until needed. Enter stage left the concept of menus. A menu contains a set of menu items: a vertical list of words, each of which can be clicked on to issue a command.

Since there are many potential commands you can't just have one simple menu — the list would be taller than the screen. Not only might it then wrap to cover the rest of the screen, but also you'd spend ages trying to find a particular item. One way of dealing with the problem is the use of menubars. Here logically similar commands are grouped together and each group of commands given its own menu.

The collection of menus are then kept together in one place, usually a horizontal bar. The other way of dealing with the problem is to use many levels of hierarchy in a menu. So instead of each logical grouping of commands getting its own menu, each group gets a sub-menu that is an offshoot of some primary menu.

Remember that even though the problem of space has been solved, menus will always, necessarily, suffer in comparison to buttons. They hide commands and increase the time it takes to issue them. If you're really on the ball you might already guess that the menubar solution is superior to the multiple-level hierachy method.

Commands seem a little less hidden because you can see the name of the menu the command might be in, while less time will be needed to go straight to the correct command grouping and then select the command than being forced to enter a primary menu first. And if you've been paying attention to previous articles, you'll also guess that a way to improve menus, as with the buttons the menus wish they could be, is to make them more Fitts-adherent.

MacOS has infinitely tall menu targets

Along with this 'targeting' ability, the other important things to consider about menus are ease-of-use and consistency. (This triumvirate we will come back to time and again, which is why I've convered them in detail in articles two through four — there was a method to my madness after all.)

Round Two

With the introduction out of the way, we can get down to business. We've already witnessed the start of the UltraGUI tournament where Windows, MacOS and RISC OS face each other off to see which is worth stealing from.

In Round One we liked MacOS's use of the edges of the screen, RISC OS's use of the pixel under the pointer and Window's use of large buttons. That was the pin-the-tail-on-the-donkey test. This, friends, is the 'order stuff from a menu' test. How hard can it be?

Acting as waiter, (we're in a restaurant, keep up) I first approach Bill Gates and his Windows 95-based line of Operating Systems. "I would like to order a hard copy of this article please waiter", he asks. I tut loudly and profess that will be really quite difficult. You see each application on your Windows screen has its own menubar. Not only are they all wasting space, but you can't predict where they'll be since the application windows move about.

That means you can't make use of muscle memory, which in turn means you'll have to stop to think about moving up to that menubar. "Well I'll make the Word window full screen, then the menu bar will be near the top of the screen" Bill suggests. Then you'll have to hit a tiny little target that's only the height of some text while being about as far from the center of the

one

Sendu Bala gets round the table to order up a GUI feast

RISC OS has a menu just about anywhere



screen (where the pointer is likely to be) as possible. Furthermore, the menus in a menubar don't even look much like menus. Using normal text, the menubar looks nothing more than a bunch of random words. "But...", Bill manages before I cut him off. Due to a lack of consistency, it might be difficult to find the command you want in amongst the various menus. Some windows don't even have menubars.

"But all I need to do is click on 'File', then 'Print', right?", Bill says, trying futily to bring his torment to an end. Some menus are also hierarchical in nature, and that's where the problem with hysteresis arises. "Hysteresis?", Bill asks hysterically.

Hysteresis is a delay in an effect or, in the case of menus, the time delay between putting the mouse pointer over a menu item that leads to a sub-menu and that sub-menu popping out. With no hysteresis, accessing a sub-menu at the bottom of a primary menu with many other sub-menus above it would be a nightmare — each submenu would open as you moved the pointer down in a confusion-inducing waterfall.

With too much hysteresis, you move to the right edge of a menu item that leads to a sub-menu but fall off the menu before anything happens; because you moved too quickly the submenu didn't open and you have to try again, only slower. Windows also has context-senstive pop-up menus, but they only have a limited number of commands in them and you never know what they'll contain until you try, if you even figure out they exist. So as they're fond of saying in the Eurovision Song Contest... "nil poins".

I see Steve Jobs smiling smugly in a corner, cradelling MacOS, and walk over. One mention of the new MacOS X (not discussed here) wipes the smile off his face and we can begin. Actually, Steve has every reason to be happy, because MacOS passes this test admirably. There's one menu bar for all applications at the very top of the screen, making menus infinitely tall.

The menus and items within them are highly consistent, aided by clear guidelines set down when MacOS first arose. Menus are clearly menus, using a unique screen font and high contrast. Even the time delay for sub-menus is perfect.

Furthermore, access of sub-menus uses an algorith that says if the pointer moves a certain number of pixels right for every pixel it moves down, the user intended to open a submenu. Otherwise he's just moving the pointer to a lower menu item.

Simple, but it works, and so MacOS gets a point in this round. Yet MacOS menus aren't without their problems. To select a menu item, you click on the menu, hold the mouse button, drag down to the item you want and let go. Apparently they thought that just one click is better than two. What they failed to realise was the way people actually use mice.

The resting position for holding a mouse is to have your fingers over, but not pressing the buttons. The buttons are specifically designed to resist you pressing them so as to prevent unwanted clicks. By design, then, it is uncomfortable to hold mouse buttons down.

Combine this with the fact that the pointer will partially obscure the text in the menu, or cause one of the items to be highlighted (making the text of that item harder to read), and you have a problem for users who are trying to find new menu items.

It may sound silly, but holding down the mouse button also puts pressure on the user to make a quick decision which can lead to error. Ideally you would click to open a menu then move the pointer away and rest your mouse finger while you look for the item you want to select. The other problem with the MacOS approach is that it's tied to a single-window way of working. I'll be covering windows next month, but MacOS windows must be brought to the front to access their menus, which is a problem for UltraGUI, who will be very multi-window oriented.

Finally I get around to Paul Middleton, he of RISC OS. Paul is at first a little stumped. He can't even see a menu from which to try and order. But once you get over the 'middle mouse button is the menu button' hump, RISC OS has it plain sailing. Pixel under the pointer beats top of the screen as far as Fitts is concerned.

They're context sensitive, but in a good way (virtually the opposite of the Windows implementation). The hysteresis is good, and you can't mistake the menus for anything else (once you figure out how to get them to appear).

Add in very good consistency and RISC OS gets a point. I did say that multi-level heirarchical menus were slower to use than menubar based ones, but as we shall see next month, freedom from single-windows is more important.

If you're keeping score, that's Windows lagging behind with 1, and MacOS and RISC OS racing ahead with 2 apiece. Can't wait for round 3? Neither can I!

END

Two-way communication

Martin Hodgson explains how you can send and receive messages

In the first of these articles you set up *Socketeer* quite quickly and easily, or perhaps chickened out and paid up for *DialUp*, and found a Browser. Either way you got online and went looking around all the Web sites. At least I hope you did.

Armed with this you visited **www.riscos.org** and found all the bits you needed for News and Mail, and set it all up as per Part 2. That set up is rather tedious, but just follow the instructions to the letter, and hopefully all will be well.

Now to test it all by actually downloading some News groups. Load *Socketeer* and log onto your ISP. You do not need to load the Browser.

Load *Newshound*. It should put up a window saying it is Connecting. If not, click Menu on the iconbar icon, select Start Fetch, and click on the three letter nickname of the news server you set up in Part 2. If still nothing happens, make very sure you really are logged onto the Internet.

If all else fails, try selecting the 'dem' group which came with *Newshound*. This will connect to the ISP called *Demon*, which will refuse entry, but at least will respond and prove that things are working. If 'dem' does work, but yours does not, check that you have got the NNTP news server name correct in *Newshound*'s xxxGroup file (xxx being the three letter name you gave during setup).

If all else fails, fire up your Browser and go to the Customer Service pages at your ISP's Web site for advice on manual set-up.

Once connected to your news server, *Newshound* will download the list of available newsgroups, and their descriptions, with a status window showing progress. This will take about 20 minutes for an recent modem. Disconnect after that.

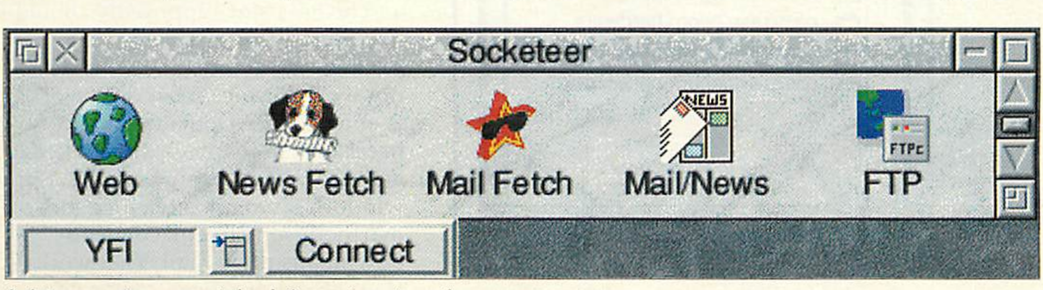
The two resultant, and quite large files (2.6Mb) are stored in the directory !Newshound.News.folder under the names Activelist and ActiveDesc. You can look at Activelist in Edit, and choose newsgroups that look interesting. Now bring up the Newshound Configure window (Menu on the iconbar icon), select Misc, and de-select the two items under Next Fetch and then click on Save. We do not want to repeat this Fetch every time we start up.

If you Menu on the *Newshound* iconbar icon and select Servers... you can load your xxxGroup file into Edit and add newsgroups. Look at demGroup to see how it is done. Don't go mad though because the first downloads at least will be large. It took me about 15 minutes for my first download of all the messages in the comp.sys.acorn newsgroups.

Now reconnect to your ISP and select Start Fetch from the iconbar menu. All the news postings in the newsgroups on your xxxGroup file will be downloaded. They will be stored in *NewsDir*. Look in !Newsdir.news and you will find directories there which are nested, one for each level of the newsgroup name.

For example you might have downloaded news on comp.sys.acorn.apps. Drill down through the directories news, comp, sys, acorn, apps, and you will get to cryptically named files which are the index, the headers, and in the next directory down, the actual articles. You can read these in Edit if you are so inclined — as you might be if wanting to confirm that the download has worked. Note for future reference e-mail is filed in *Newsdir*, under !Newsdir.news.Email.

Incidentally, after downloading the messages, click on *Socketeer* and select Disconnect, unless you



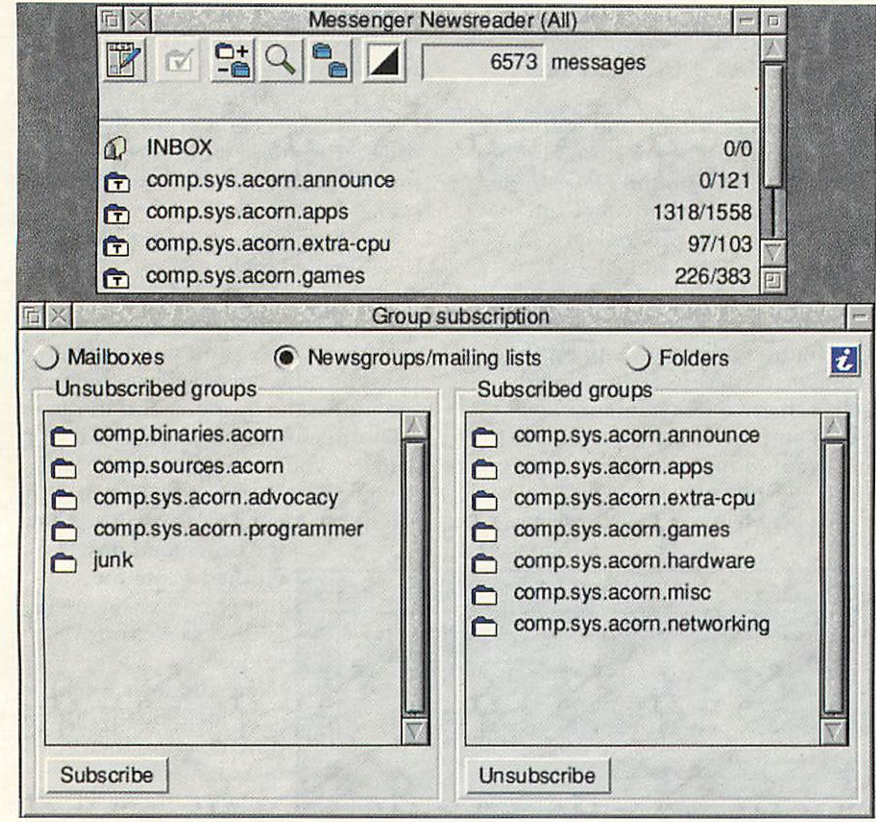
Socketeer can get you connected and givs you icons to use for access once you are

want to browse the Web. Reading all those messages can take some time.

Now load *Messenger*. It should auto-load *Newsbase*. If not, load it yourself (and re-read my Part 2 instructions). Click Menu on *Messenger*'s iconbar icon which should have your Username shown, in place of showing "Messenger". Select Newsreader.

This brings up a small, and unhelpful looking, Messenger Newsreader window. Click Menu in this, select Display, and select All groups. The window will now show all the newsgroups you are subscribed to, and how many messages there are in each group. Double-click on any newsgroup, and another window will open, showing all the message headers in that group. Double-click any message header to open yet another window, showing the actual message text.

To control which newsgroups Messenger has you subscribed to, click the mouse Menu button over the Newsreader window and go down to Misc —> Subscription (Figure I). Click on the Newsgroups/mailing lists radio icon. All the groups present in *Newsdir* should be shown on the left. You select the ones you want, and click on Subscribe to move them to the right hand side. Note that this does not control *Newshound*, which will continue to operate according to the listing you have typed into the xxxGroup servers file.



Messenger's newsgroup subscription control

That is about it for Newsgroups. Next we have to get e-mail working.

E-mail setup

Setting up *Popstar* to fetch and send e-mail is really quite a trivial task now. Inside the Popstar archive you downloaded from the author's Web site are two files named 'Users' and 'Choices'. Open up your !Boot.Choices directory, create a new directory in there named POPStar, and copy these two files into it. In 'Users' you will tell *Popstar* about your incoming, POP, mail server. In 'Choices' you tell it about your outgoing, SMTP, mail server. One line in each case. You get the details from the OFFL/INS file for your ISP as before.

So, load the Users file into Edit and go down to the last line. On this last line, delete everything before the first [09] and type your own User Name there. This is the name which you chose when you signed onto your Internet Service Provider. This is also the first part of your e-mail address. In the next slot after the first [09] replace Remoteuser by your User Name also. Replace Password by the password you chose to use with your ISP.

Note that [09] in this file cannot be typed in — it actually is the control code indicating a Tab (if you ever need to introduce one using *Edit* press Control+9).

The next slot supposedly should be your POP server name, **pop.freeuk.net** in my case. This does not work for me. What does work is entering the Domain name, **freeuk.com**, in my case. Then when I activate *Popstar* it puts up its status window saying it is fetching for marthodgson@freeuk.com and downloads my e-mail. That works. If you have problems connecting

for mail, I suggest you try both approaches and use the one that works. I am using version 2.02a of *Popstar* — other versions may be a little different, and different ISPs might have their own idiosyncrasies.

Finally replace Delete with 'Y' and then delete everything to the right of that. You can add those options later if you really want them. My entry looks like this:

```
marthodgson[09]marthodgson[09]MyP
assword[09]freeuk.com[09][09]Y
```

Then save the file back into !Boot.Choices.POPStar.

Now load the 'Choices' file into *Edit*. At the top is the entry for the SMTP server. Add your server name, again from the ISP's details. My entry should be:

```
SMTP:relay.freeuk.net
```

Note the colon. However, as with the Users file, the entry that actually works for me is **SMTP:freeuk.com** That is, it wants my ISP's Domain name again. Save this file back into !Boot.Choices.POPStar. I suggest you leave all the other options as they are, to be changed later should you wish to do so.

Reading mail

Once you're ready fire up *Socketeer* and connect to your ISP. Double-click on *Popstar*, and it will connect to your mail server and download any mail there may be waiting for you. It puts up a small progress window as it does so. The mail should be stored in !Newsdir.news.Email.yourusername, where the latter will be a directory created and named with the Username you use to log on (all done automatically for you).

You can not see any of the items in there, and the directory returns a zero if you do a Count on it from the Filer — all very secure from prying eyes (but see the section on Working with Messenger/Newsbase below for help). In the unlikely event that there is no directory, create one yourself. Make sure you use the same name as the username you typed at the start of the line in the Users file for *Popstar*, in !Boot.Choices.Popstar

To read your mail, load *Messenger* and *Newsbase*. Click Menu on *Messenger*'s iconbar icon, move the mouse over Login... and down to the entry with your User Name shown. Select that to log into "your" section of *Messenger*. Then left click on the iconbar icon to open up the Mailbox INBOX window, which should show the messages collected there for you.

Double-click any message to open it up in another window for reading. If there is an attachment, the icon for that shows at the bottom of the window, whence you can save it or do whatever is appropriate.

Any problems with *Messenger / Newsbase* stem from its versatility and the security features. It is possible that *Popstar*'s progress window told you it was downloading mail, but you cannot find it when you open *Messenger*. So you have to search for it.

Menu over the Mailbox INBOX window, select Misc —> Folders to bring up the *Messenger* Folders window. Clicking the Search button on the Folders button bar brings up the Search window. Enter '*' as the Match criterion and select each of the Groups in turn from the menu available from the next slot down.

Clicking the Search button brings up a Search Results window, showing all messages received to date by that Mail Group. You can now read them. Having found where the messages have been placed you can then try to deduce why they are there, rather than where you thought they would be.

Sending mail

With *Socketeer*, *Popstar*, and *Messenger/Newsbase* loaded to the iconbar, make sure *Messenger* has you logged in under your Username. Left click on *Messenger* to open the Mailbox: INBOX window.

Click on the leftmost icon at the top of that window to open the Send Mail window. Click on Edit at the bottom. Ignore any message to use another editor, and open the Messenger edit window. Type in your message, then click on OK.

Back in the 'Send Mail (Editing)' window enter the destination e-mail address, and the subject. Click the Send button. If you are not online, the message will be stored in the Folder named 'outgoing.mail'.

Connect to your ISP. *Popstar* should activate as soon as it detects that you are online, and put up a small status window saying it is sending your message. It will also update its logfile with full details of the message it has sent. Click Menu on *Popstar*'s icon and select 'Show Log' to confirm that.

That really is the end of this series of articles on using free, in the main, software to get onto the Internet so as to browse the Web, join in Newsgroups, and send and receive e-mail.

Final thought

A lot of work has gone into all this software, which the authors have made freely available. Might I suggest that once you have e-mail working, you mail a vote of thanks to each and every one of them for creating a system that's better than most others, and free. END

Free Ads

• Wanted: Network card for SA RPC. Please E-mail me at **ccwilliams@btinternet.com** if you have one going spare for a reasonable price. Chris.

• FOR SALE: Castle Technology 2 slot backplane, less than 4 months old, perfect working order, still got lots of warranty period left. Selling to get second slice which comes with new b/p. Visitors welcome to see it working. £30 Email **ms@arenaman.com** or telephone 0113 246 5303.

• WANTED: A4 laptop, min. spec, cheap and fully working! It's just for writing documents in EasiWriter, nothing fancy. Please contact me with any offers. Email **ms@arenaman.com** or telephone 0113 246 5303.

• A3000, A4000 and A5000's. Have been in use in an independent school. Offered for sale at very reasonable prices. Buyer collects from Shrewsbury. e-mail only to: **d.fry@shr.gdst.net**

• SA233, 24M, 4GHD, 32xCD rom, Castle SCSI i/f, Aleph 586/100 PC card, Eagle M2 video card, Sportster 33.6 FaxModem. All supporting software-PC&Acorn. Serious offers over £600 by e-mail to **pete.dickinson@lineone.net** Gloucestershire.

• Wanted: musicians for major new RISC OS games titles. Please contact Nathan at **nathan.atkinson@ntlworld.com** or **aweston@argonet.co.uk**

• A3010, 4Mb, 340Mb HD, 14in Philips colour monitor. Brother dot-matrix printer. With FontFX6, Easyfont Pro, Spark r/w, Publisher, Artworks, Fireworkz, Sibelius and much more. £185 ono. Tel: 0161 792 5125 or 07733 250394

• A3010, 4Mb, 14in Acorn colour monitor, two Star printers, full manuals and master discs, workstation. Ideal for spares. Exc cond. FREE! Sue, 01384 258021. West Mids.

• Risc PC 486 card. 2 HD; SCS card; Syquest; CD; lots of software; music scoring; Word Perfect; ProArt2; monitor. Norwich. Tel: 01603 75520

• Archimedes A440/1 4Mb; 40Mb HD; ARM3; RISC OS 3.1; £60. AKF12 monitor £25. AKF30 monitor £35. Risc PC x86 DX4-100S card unwrapped £45. Tel: 0121 744 6069. Solihull West Mids.

• Wanted: Charity needs two rollerballs for use with Risc PCs for children with physical disabilities. Chertsey, Surrey. Phone Peter 01932 567131 or e-mail **psaker@whitelodgecentre.co.uk**

• A4 portable recon. battery; 4Mb ram; 60Mb HD. New screen. All manuals, case, light use, only £450 ono. Tel: 0151 336 1506. Exc cond. **frampev@eurobell.co.uk**

• Acorn PC600 multimedia with boxes if software. £100. Ring 01282 614463 9am-5pm or **a.j.parsons@zednet.co.uk**

• Risc PC StrongARM 200MHz, RISC OS 3.7 32Mb Ram, 0.5Gb HD, 2Mb VRAM, SIMTEC IDE Card, No CD Drive. Ovation Pro, Top Model2, Doom. All Boxed. Buyer Collects (Edinburgh), any offers? E-mail: **stokess@logica.com**

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Although we try to publish every ad we receive, we can make no guarantees; publication is entirely dependent on space and time constraints.

Please fill in your name and telephone number below – these will not be published but enable us to contact you in case of any queries. Make sure you include your own town/county in your ad to help potential buyers with their purchasing decision.

Your name:... Your phone number:...

Musical yak

This time around there is something for everyone at Anglia Campus. French and Spanish students at secondary level may already be addicts of The Memory Game, Whack the Word and the Vocabulary Game, and now it's the turn of German students to play their way to a stronger vocabulary. German Vocabulary Activities has five activities available under the heading of *Food and Drink*, with many more to follow in the areas of *Self, Family and Friends, Interests and Hobbies* and *Your Home and Local Environment*.

Word Whizz History uses English language teaching to open up the curriculum to Special Needs students. Using ten key words from each of the five periods available at present, Word Whizz spells out the end for Saxon England in The Norman Conquest, recreates the glory that was Rome in The Romans, lets you get your foot on the social ladder of Norman rule with The Feudal System, give Religion in Medieval Life a try or decide whether you're for Charles I or Parliament when you visit The Civil War.

Musical Yak in the Sack is aimed at Key Stage 1. This yak with rocks in his socks now rocks with rocks in his socks, in a musical version of this, a Flash Big Book tale. As well as Flash animation, audio, and line by line or word by word highlighting you can sing along with the funky Himalayan beast of burden.

For 7 to 11-year olds you we stay with the musical theme to find out how story telling and music making went together in the Greek world, as the young Democrates and his teacher Demodocus explore the tales of Homer. The unit, called A Musical Odyssey, includes activities, sound files and plentiful external links.

If you'd like to get involved in one of Anglia's Online Events, then look out for sculptor, Rick Miller, in his virtual studio for our next event. Rick Miller has been creating sculptures in card and paper for the past 25 years. Participating schools will be able to watch him at work via a Web camera as he creates a sculpture on a pre-arranged subject, while at the same time, students will be asked to create their own sculptures and seek guidance and advice from Rick by e-mail.

At the end of the event schools will be invited to take photographs of their students' completed sculptures for a competition. The best primary and secondary sculpture will each win two of Rick's acclaimed card sculpture kits of the human skeleton.

If that doesn't appeal how about designing a kite? The task for Primary students involves designing the covering for a delta (triangular-shaped) kite while Secondary students are challenged with a rokkakku (six-edged) kite.

The Primary and Secondary winner will each have their design made into a kite by professional kite maker, Helen Howes. The project contains lots of hints and tips to help pupils with their designs. There are also some examples of Helen's work.

If your Key Stage 2 class is involved with Materials this term visit this area where you'll find a new unit exploring rocks, soils, solids, liquids and gases that make up this material world. Meanwhile older students (Key Stage 4, 14-16) can discover the reason as well as the rhyme of poetry in Analysing Poetry, your guide to the skills and techniques of poetry analysis. The unit includes audio extracts from pre-Twentieth century poems and several interactive tasks.

www.angliacampus.com

In brief

Express help

Newly liberated Logotron (01223 425558) are offering busy teachers help via their TeacherXpress.com with a wealth of information and resources. Logotron are promising a fast way to find interesting unique, new information and educational resources.

The service is a showcase for Logotron's advanced automation technology developed with Cambridgeshire Minds. "This started out as my own home page - and a teacher mentioned that other teachers might benefit from access to it, so we created the concept of TeacherXpress.com, " commented Logotron's Chief Technology Officer, Julian Pixton.

"Through the work we were doing with the TTA and the TeacherLinc program, it was clear to me that many teachers would welcome a simple, free gateway to the wealth of quality available on the Internet.

At first glance this is a page of links but the advanced software robots managing the page check all the links, inserting new entries received from the panel of educational advisors, removing outdated entries and periodically re-order links depending on the level of use by users with more popular links moving towards the top of each category.

This has not been achieved by conventional programming but uses so-called genetic techniques creating working software objects from a high-level logic statement of a problem and has already received nominations for the New Statesman's New Media Award. Try it for yourself at:

www.TeacherXpress.com

Contacting me

Pam Turnbull:
educ@acornuser.com

Geography

Pam Turnbull explores the interior of Web-based Geography sites

This month there is another instalment of our series of helpful Web sites for harassed teachers. In this issue we're concentrating on sites with a Geographical leaning but with significant cross-overs with Science. There are some amazing images to be acquired from the Web but also look into creating e-mail correspondence with other schools in distant places which will provide cross-curricular links with ICT and Literacy.

Water Matters

www.waterlco.co.uk/education

Star rating: ***

A free site for Key Stage 2 and above, this site has been commissioned by the Company of Water Conservators — a charity dedicated to furthering public knowledge about the water industry. The emphasis is on interactive learning with sections for primary, GCSE and A-level studies. There is also a useful index of Web links.

I particularly liked the fact that this does not purport to have all the answers, rather encourages students to research and design experiments. In addition GCSE and A-level students can test their knowledge of the science of water and its environmental impact through MCQ with instant feedback. If you're so taken with the site there's a section on careers including interviews with scientists and engineers.

Mozambique Stories

www.channel4.com/plus/mozambique/

Star rating: **

Provides a background to one of the poorest countries of the world. Mozambique is explored in its geographical, historical and climatic contexts as well as in its current political situation.

Pl@net.com

http://planet.channel4.com

Star rating: **

Supporting 4Learning's series pl@net.com this site places a strong emphasis on action and campaigning to show how small-scale individual actions can have an effect on global environmental action. Children can post results of their activities as well as read about what other schools are involved with all over the world.

Diary of a Garden

www.channel4.com/plus/diary_garden

Star rating: **

In May 2000 the first botanical garden to be created in the UK for 200 years arrived in the form of the National Botanical Garden of Wales. Here you are given details of the garden and the Great Glass House. Also included here is a history of plant hunting and a good section for further research with suggestions for books, organisations and Web sites on horticulture and the environment.

Raging Planet

www.channel4.com/plus/raging_planet/

Star rating: **

Suitable for secondary students this explores the power of Nature, showing how it has shaped the Earth. This takes the form or a guide to ten natural phenomena: avalanche, blizzard, earthquake, fire, flood, hurricane, lighting, tidal wave, tornado and volcano.

Arctic Village

www.arcticyear.org

Star rating: **

This August an expedition of young explorers aged between 18 and 20 will leave for the Arctic for a year where they will take part in environmental research work sharing this with schools and colleges throughout the world via the Internet. Lesson plans, created for teachers by teachers, and linked to the national curriculum across all age ranges, will be available on the website.



A variety of topic including Arctic weather conditions, equipment, nutrition, navigation, medical issues and ecology will be covered. The current site looks into the preparations for the expedition and enables children to access journals and the training regime as well as looking at previous expeditions.

Atlas Online

www.childrensatlas.com

Star rating: ***

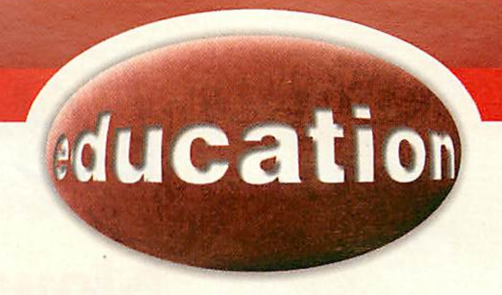
A child-friendly reference source targeted at Key Stage 2 is updated regularly to provide progressively more detailed views of the world's physical, environmental and political landscapes.

GeoNet

www.internetgeography.co.uk

Star rating: ***

The site is divided into sections: Physical Geography, Coasts, Earthquake, Ecosystems, Glaciation, Limestone, Plate Tectonics, Rivers, Volcanoes, Weather and climate, National Parks, Landuse, Migration, Urbanisation, Economic Geography, Employment Structures, Industry and



online

Population and Human Geography.

In addition to the information there, there are activities to take part in, information for teachers, plus the chance to ask an expert and recommended links. Teachers are also encourages to contribute articles and resources such as revision notes. A new addition to this site are resources for the Global Fashion Industry produced by the QCA.

GeoResources

www.georesources.co.uk

Star rating: ***

This is a UK site where the aim is to provide all your geographical needs. Links are organised by age group and if you want to try your hand at Virtual Fieldwork there are digital image tours of rivers, coasts, sand dunes and towns. Then a Case Studies section provides notes, photos and diagrams about earthquakes, volcanoes and oil disasters. There are clear outline maps, ready to print or paste into a paint package which will have a variety of uses.

A weekly GeoQuiz is a fun way to test Geographical knowledge while the Site Search facility offers a list of possible pages to look at. A Teacher's Page provides links to organisations, exam boards, publishers and so on.

Epals Exchange

www.epals.com

Star rating: **

With members in Slovenia, Canada, France, USA as well as the UK, schools can make e-mail links across the globe. Just click on a country link to view member profiles for that country. To join, set a profile for your class/school. There are discussion boards, translation, chatrooms, class to class projects and so on. You can even get detailed weather forecasts for more than 78,000 cities around the world.

A long-standing free (and safe) service, ePALS provides members with the collaborative tools, ideas and community needed to communicate worldwide.

Global Climate Center

wwwghcc.msfc.nasa.gov/ghcc_home.html

Star rating: *

Here you can access the areas of study of the centre many: the Global Water Cycle, what Microwaves teach us about the atmosphere, observing lightning from space, how satellites observe changes in atmospheric aerosols and their effects on the climate, measuring atmospheric winds with lasers and the urban environment.

You can also access satellite data from many different satellites, surface ground validation stations, as well as high altitude aircraft outfitted with science instruments. Plus an extensive set of geostationary weather satellite images.

Recently, the GHCC initiated an effort to apply NASA remote sensing data and technologies to issues of local and regional concern. These include the vulnerability to climate change and the evaluation of the potential social, economic, and human effects on agriculture, forests, fisheries, local natural ecosystems, and water resources.

Four Seasons

www.4seasons.org.uk

Star rating: ***

A nice-looking site which features three school-based projects and a range of environmental education resources. Each project is related to the weather and makes use of data collected from automatic weather stations at a series of sites in England: The Weather Project, Signs of the Seasons, Energy and the Weather and The World Cup'98 Project where you must 'Guestimate' what was the biggest 'pickup' in electricity demand during the England and Wales World Cup Final in France. There are teacher resources and even a *Signs of Sustainability Quiz.*



In addition there is up-to-date information on environmental events and resources, information on how schools can become involved in Local Agenda 21 - the action plan for sustainability and environment, seasonal reminders for school grounds maintenance and development and more information on the Environment Centres who are providing information for this project. The Four Seasons Project is looking for schools that collect weather data to join the project.

Flood modelling

www.environmental-agency.gov.uk/gui/flooding/flood.htm

Star rating: *

Flood modelling and information based on the River Arun. The site allows you to navigate around a landscape showing the River Arun in simulated flood conditions. You start by selecting a flood depth from the left hand frame. While the righthand frame offers a range of different perspectives. Choose a view to bring up the relevant image into the centre of the screen and see how it changes. END

* some good points
** good for teacher resources
*** can be used constructively by teachers and students

Secondary nets

Martin Devon gives a lesson in RISC OS power and non-integration

Stonar School is situated in rural Wiltshire and is a non-selective boarding and day school for 350 girls aged 5 to 18. It was among the first schools to move over entirely to a graphical desktop. Its association with RISC OS dates from 1990 and continues unbroken today.

From the very beginning a rigorous upgrade policy has been enforced throughout and the full complement runs to some hundred workstations, giving a pupil/machine ratio as favourable as anywhere.

Twenty systems are "Kinetic" Risc PCs and the remainder are standard StrongARM machines, mostly under RISC OS 3.7, but with a sprinkling of RISC OS 4. Most have a generous (for RISC OS) 32Mb RAM and all have 2Mb VRAM. There are teaching groups of 17 and 19 machines in the main computer room and in the Study Centre (reference library), together with smaller groups in departments and in each boarding House.

Most sixth-form study rooms have individual machines. Girls may use at any time and without supervision any computer which is not actually in use for teaching. Some sixth-form machines have recorded 22 hours a day continuous usage, usually just before coursework is due to be handed in.

Networking

Our first Econet line was laid in 1991 and another the following year, linked by an SJ Research bridge. But there was a big problem. Stonar is on a hilltop and very susceptible to lightning. When, for the second time, all the Econet cards were destroyed — along with the suppressors installed after the first incident — it was time to think again.

So, in the summer of 1994, when the conventional wisdom still favoured 10base5 Ethernet, we rather courageously took the plunge into fibre-optics. We designed our own star-system and installed all the cables with our own resources though with all terminations professionally done for us by FITS Ltd of Bristol, who have carried out this function for us from time to time ever since. We have never regretted for a moment the decision to go fibre-optic.

Although the system has been greatly extended and the electronics updated subsequently, those early fibres are still at the core of the network. Now, there is some 4km of duplex fibre equivalent, reaching out from a central point into every academic building and each of the boarding houses, some of which are a quarter-mile from the centre.

For historical reasons dating from the uncertainty of Econet, all the working applications are held on the hard discs of individual machines. This gives current advantages of maximum flexibility and speed of booting. At first sight, the method presents a problem of software maintenance, but not so; at boot-up each machine runs a small utility which forces it to look at one of the servers.

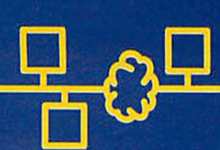
If there is any change to be made, it is carried out by means of an Obey file run over the Net, after which the client machine acknowledges its action by creating a dummy file named for its own host name. The upgrade system is simple, but effective. All or any of the machines can be upgraded without manual intervention within a 24-hour period.



StonarNet

The file-server is a RISC OS 4 machine, standard except for the SCSI2 bus to which are attached IBM discs of 18, 18 and 9 Gb capacity and a tape streamer. Server software is Network Solutions' Advanced Level 4. The two 18Gb discs carry some 73,000 work files (at the time of writing), a figure which increases by around 300 files daily.

This server also carries the administrative end of the automatic



Scenario

You've got a network. You've got a variety of different computers which you want to use. You require effective Internet and intranet access. You want consistency, reliability and performance. You need ease of use and management.

Take Control of your School Network

One Server

Solution

The NetManager is a powerful, expandable server which offers high performance, yet is easy to manage and is low in cost. It's flexible nature allows it to fit in with the majority of networks be they NC, PC, Acorn or Mac based. Using the absolute industry standard software used by the majority of Internet services worldwide, you can be certain of its reliability and compatibility.

- Use with any platform
- Low cost (no licences to buy)
- More cost-effective and easier to use than Windows NT
- Remote administration

Internet/Intranet

The NetManager provides transparent Internet access to all the machines on your network even if you only have a modem. It offers email services that integrate with Microsoft® Outlook Express, ANT Marcel® and most other mail clients. Alternatively, the easy-to-use web-based email service offers consistent email access to any machine that is running a tables-capable browser.

The NetManager acts a web proxy for your workstations and also has full web-serving capabilities to allow you to build an effective local intranet. Server management is mainly web-based meaning you can use any web-enabled computer to add, edit and delete users, configure email and Internet services. You can set up mailing lists, aliases and even discussion groups.

- Web-based user management
- Web-based e-mail service with
- URL blocking capability
- E-Mail content filtering
- Absolute industry standard (POP3, IMAP4, SMTP, HTTP, FTP)
- Modem, ISDN TA or routed access to Internet
- Transparent dial-on-demand Internet access

File/Print Serving

The NetManager can serve PCs as though it was an NT server, MacOS computers as though it was an AppleShare server, RISC OS computers as a Level 4 server and also Network Computers/Thin clients. The simple user management and high performance makes it ideal for networks of all sizes. Creating a user is as simple as entering their name and password; you don't need to manually create shares, volumes or set permissions unlike with other servers. In the same way, the NetManager will act as print server to PC, NC, Acorn and MacOS computers on your network. Print queue management and printer configuration is web-based for ease of use.




AUN/Level 4 Functionality
Full AUN/Level 4 functionality allowing older Acorn networks with machines configured to boot and run software from a Level 4 server can now boot from a 100mbps backbone and connect to the Internet* and E-Mail* without the need to load TCP/IP saving limited machine memory.



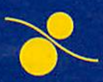
E-Mail
Full IMAP4.1, POP3, SMTP server. Includes web-based email (including addressbooks, attachments, etc.) configurable on a per-user or per-group basis. Content filtering of inbound and outbound mail. Spam filtering and access control list.

The NetManager will work with the oldest Archimedes through to the latest RISC OS machines including the RiscStation and NC!
*See our NC advert on **page 12***

Many Uses



NAT
Gives machines internally transparent secure access to the outside world for things like streaming and video conferencing. Port redirection allows internal services to be mapped to the outside world.



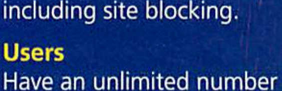
Printing
Print sharing for Acorns, NCs, PCs and Macs to either local or network printers. Web-based queue management and configuration.



Fax
Send faxes simply by printing to a shared printer from any platform.



Proxying
Cache web pages locally to speed up Internet access, including site blocking.




Users
Have an unlimited number of users each with their own email and user area.



Internet
Connect to the Internet with ISDN, modems or a router. Dial-on-demand gives transparent access.

WWW

WWW
Full web-server that can serve pages internally and externally including web technologies such as PHP, SQL, cgi-bin, perl.



Windows
Serve printers, CDs and home areas to Windows computers as though it was an NT server, but without the licence cost or management overheads. Fits in neatly with existing NT networks.



Security
Full kernel level firewalling to define exactly what machine can access what.



Intranet
Each user can have their own personal web pages.



MacOS
Serve printers and home areas to MacOS computers as though it was an AppleShare server.



Storage
Personal home areas and shared resources. With your choice of tape backup.



Management
Simple web-based and menu-driven management of users, printers, network configurations, Internet access, etc.



Support
Full support is given by telephone, our support web site, customer mailing list and remote dial-in management. Software upgrades and patches download via a sophisticated automated upgrade system which identifies which server you have and installs all necessary upgrades, by choosing the upgrade option from the admin menu is all that is required!

The NetManager is the official solution for
RiscStation
Networks.

Includes Acorn ICA support for use with



UK Sales



Address: Precedence Technologies Ltd
86 Kings Hedges Road
Cambridge
CB4 2PA

Tel: +44 (0)1223 562500
Fax: +44 (0)1223 563522
E-Mail: sales@precedence.co.uk
WWW: http://www.precedence.co.uk

Southern Area Sales

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Internet Computer Solutions

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Surrey
GU26 6QE

Tel: +44 (0)1428 608121
Fax: +44 (0)1428 608123
E-Mail: sales@surftec.com
WWW: http://www.surftec.com

Pricing

Prices include hi-specification server hardware, 10/100mbps network card and come ready installed with NetManager software.

Web Proxy/E-Mail Server:	£1,199
+ File/Print Server:	£1,399
+ NC and NCWorks suite:	£1,999
+ TotalFiler Site Licence:	£ 70
+ Network Computer System	£ 370

Prices exclude VAT



upgrade system. The 9Gb disc is used for an incremental backup which takes place automatically at 3am daily. All newly-created or modified files are copied from the main discs to a daily directory on the smaller disc, into which files are automatically compressed using David Pilling's *SparkFS*. The whole contents of the main discs are transferred to DDS tape from time to time. It is true, however, that almost all requests for file recovery refer to yesterday's file having being overwritten, so the ability to effect instant recovery from hard disc is a distinct plus.

Incremental backup implies that files are correctly time-stamped and to ensure this, all the workstations run a copy of Joseph Heenan's *Freetime* in their boot sequence. They are synchronised by reference to the corresponding time-server module installed on the other RISC OS server.

Although the use of a RISC OS file-server is currently somewhat unfashionable, it does offer very great advantages in configurability and integration, as shown above. Moreover, as it serves individuals rather than groups, the restriction to 10 megabits network throughput has never proved any kind of limitation. Coupled with a high degree of reliability — it will stand for a month or more unattended — there is no serious reason to depart from the status quo.

Printing power

A file-server is commonly also used as a printer server. We have no need for that function, because each group of computers has its own locally networked printer. Printing is a major consideration, as we get through at least two toner cartridges every week and perhaps 100,000 A4 sheets a year.

The Computer Concepts Laser-Direct LBP8s are still in fine shape after eight years. Although not as sophisticated as more modern printers, they appear truly indestructible. Latterly we have very successfully used a number of D-Link network print-servers, which have the advantage that the printers run regardless of what is happening elsewhere in the group. In these cases we print using Peter Bell's effective *lpr* module. Our latest acquisition is an Epson Aculaser colour laser. It is a fine piece of equipment which we drive over the network using the PostScript drivers.

Resources server

Separate from the file-server is a second Risc PC (this time a Kinetic, as it also doubles as the administrator's workstation) again with the addition of SCSI2 and a single 18Gb harddisc. This carries images of some forty-five educational resource CD-ROMs which have been transferred to hard disc. They are exported (without the need to log on) using ShareFS.

Since Stonar is "home" to a large number of children, home facilities are represented by a range of computer games, which are also held on the Resources server, but are available only during out-of-school times. This function is achieved by scheduling the shares on and off on a timed basis.

It is worth adding here that children make many attempts to copy games so as to make them available at unauthorised times. From time to time, the network discs are swept by software designed to detect the presence of games. It is an ongoing battle of wits to keep up with the ingenious lengths to which children go, such as attempting to hide renamed games twelve directories deep within apparently work files.

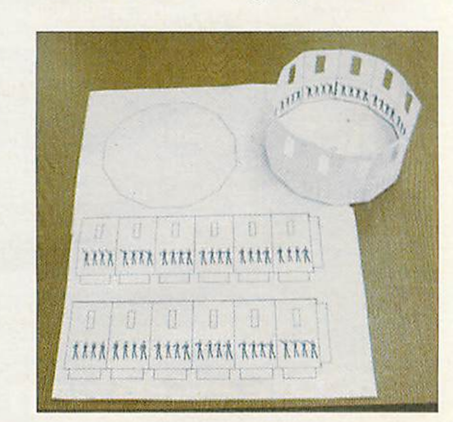
Internet server

Without any doubt the most fundamental change to hit education in recent years has been the introduction of the Internet. The factor which made the greatest difficulties for RISC OS systems was the rise of the PC-based CD-ROM, resulting from Acorn's failure to port Macromedia *Director*. It is ironically clear that the CD-ROM resource is already passé.

Although there still remains a large amount of material available in Macromedia CD-ROM form, which is an intrinsically single-user medium, most new resources are being published on the world wide web, often on a nominal subscription basis. Web resources can be continually updated; they are available anywhere at any time, even at home if needed.

Children are beginning to think of the Internet as their primary source of information. Provided they are taught how to use the search engines effectively, as they are at Stonar, the Web is indeed a golden treasury of information on every imaginable topic.

From the boarders' point of view, the advent of e-mail has meant the end of waiting for contact with parents and friends. The daily e-mail, however short, is eagerly awaited.



All the more pity, then, that despite public utterances of the government and British Telecom, Stonar, and many similar establishments, are left to make the best of an ordinary domestic modem connection! No ISDN and certainly no ADSL for us; Stonar is outside the metropolitan magic circle.

During the last three years we have become almost alarmingly dependent on our Navaho Internet server. At first used the disastrous *InterTalk*, but when Navaho appeared its superiority was instantly obvious. Stonar was one of the earliest users of Navaho and played a small part in its development.

It is a feature of school usage that certain Web pages are fetched repeatedly. If these pages are cached locally, they can be served at ethernet speed, not BT's miserable 31k, which is the best that can be managed over our line. With perhaps 10,000 Web fetches daily, a local cache of 70,000 to 100,000 pages is rapidly built up and is truly our saving grace. Add in the Web-based e-mail which can be accessed by members of the school from anywhere in the world and it is easy to see why we can sing the praises of our facilities.

For some time, we ran the earlier version of Navaho on a Risc PC. Sadly, however, we had in the end to acknowledge that RISC OS was no match for Linux when it came to a server OS which had to work hard for its living. The present server was assembled for us by Dell on the Poweredge 2300 frame, and is an impressive black box with dual Pentium III processors and individual wide SCSI discs for read-only and for read-write functions. It runs Red Hat 7.0 at the moment.



Now here is the stop-press news: a most exciting development is about to happen, which is that we have finally given up on BT and have just contracted for a permanent, 2 megabit leased-line connection direct to the Internet, opening a whole new chapter of possibilities.

Software solutions

We believe that the software we run at Stonar is, for our purpose, the best of its kind on any platform. Consider the "big three" applications:

All our word-processing and desktop-publishing is carried out using *Ovation Pro*, from the Junior department through to the VIth form and the administration. Compared with the ease and speed of *Ovation Pro*, *Word for Windows* may be (over)large and fully-featured, but it cannot disguise the fact that underneath lies a rather primitive, old-style page-based word-processor.

For our spreadsheet, we use *Fireworkz Pro*; an easy-to-use, well behaved application. As for *Excel*, one might ask: why will it not word-wrap within cells? Why does it get standard deviations wrong? And why did Microsoft not know that 2000 was a leap-year? Enough said.

Our database is *DataPower 2* from Iota. This offers formidable technical capability, but is usable throughout the school. Compare this with *Access*, or perhaps "Inaccess" would be the more appropriate name. Considered too difficult to use in schools, *Access* is rarely used and most have to bodge their database tasks on a spreadsheet.

What else do we use? You name it, we probably use it. We use regularly *Artworks*, *Animator* and *Photodesk* up to A-level Graphics; *Sibelius* throughout Music; *Easiwriter*, particularly for use with *Word* files; *RiScript* is our *Acrobat*; *Sleuth* OCRs those interminable examination specifications; and all those useful little utilities like *Flash* contributed by the RISC OS community.

What software would we like? Well, the range of Measurement and Control software is not as wide as might be wished, and it will be nice when *Oregano* gains some frame furniture.

Future actions

As are most places, perhaps, we are under constant pressure from the PC sales outfits, the latest manifestation of which is the laptops initiative, "anytime anywhere" to which might be added "so long as you have the cash pile and technical staff to keep running a motley collection of toys which are fundamentally unsuitable for use in schools, and no two of which are identical".

Coupling this with the inevitable loss of control over both OS versions and software, totally so in the case of pupil-owned equipment, I can do no better than quote Christopher Dawkins at Felsted School, who has said, among other wise words:

"You need a queuing system on one side of your Computer Centre and a skip on the other".

Again Christopher says,

"The trouble with laptops is their shape. If they were triangular they would make better doorstops next year".

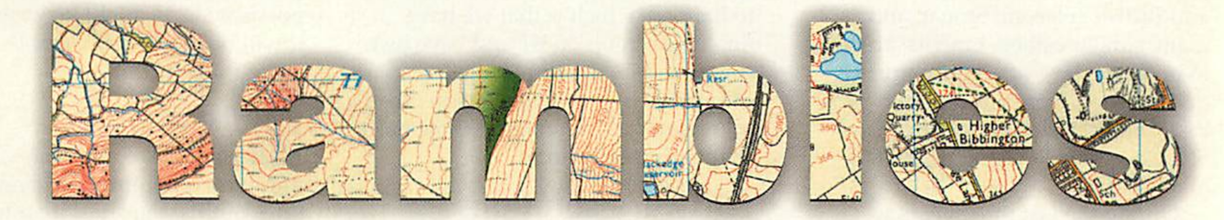
What, then, for Stonar? We are looking forward keenly to the arrival of the new RISC OS laptop. A very interesting situation will then arise. Windows laptop or RISC OS laptop? I make a guess that the uptake of the RISC OS type will rapidly outnumber the former. A straw poll of VIth formers shows that PC laptops are generally disliked and derided and have been purchased only in the absence of any alternative.

On the other hand, we need a very small number of PC-type machines in one form or another while there are resources of that retrogressive kind to be made available and portability indicates perhaps half-a dozen laptops, firmly controlled.

In ICT one has constantly to peer into the mist and try to decide what is going to be needed a couple of years hence. At Stonar, the decisions we have made have been, with very minor exceptions, right.

Long may it last. END

RISC OS



Mike Cook buys another round for RISC OS users

I have been playing with a Texas Instruments DSP (digital signal processor) this month and have had to get to grips with not only a different instruction set but a different sort of chip architecture. This chip uses a complex instruction set or CIS, it makes you really appreciate what we have with the ARM (Acorn Reduced Instruction Set Machine).

So far I have been using their evaluation board running software from the Risc PC's 486 processor card. Unfortunately every now and again it loses communications through the serial port, it is probably due to the latency involved in running a DOS environment on a Risc PC as the I/O has to be emulated even though there is a native processor on board. So far it hasn't annoyed me enough for me to write a native RISC OS version but you never know.

First off is Martyn Fox with a bit of feedback from last month:

"I read your comment about tag lines in last month's *Acorn User*. I don't normally use them myself and certainly don't use an automatic tag line generator. I do, however, sometimes attach one when I make a comment about the near-monopolistic situation of a certain very large Seattle-based company, this is it:

Imagine if one man could raise his hand and stop all the world's computers. Imagine who that one man might be."

Remember kids, we won't let this happen so don't have nightmares. Next up is Gareth who has a question concerning his journey into the delights of ARM assembler.

Q "In recent months I have been attempting the challenging task of learning assembly language, mainly using the ARM Code series by Matthew Bloch from past *Archimedes World*. However, there is something that has been seriously confusing me and I am hoping you will be able to 'iron' it out, as I do not yet feel I can really move on in the series.

"It is a simple query: the STR instruction is being used for storing bytes into the screen memory. Now, doesn't it make sense that if you allocate a register for your 'screen base' address, for example R0; if you then store bytes via this register using the STR instruction, it should affect the appearance of the screen.

"What if though, you store bytes into an anonymous address for example R8 and then tell the computer to execute the instruction: STR R8,variable. In the program I am working from, for some strange reason, despite the fact that neither R8 nor the variable contain the screen base address, all data placed into the variable alters the screen, why is this or is there something I am missing? Oh, by the way, what does the ARM code instruction BNE stand for?"

A I think you are a bit confused here, the STR instruction can't store anything into a register, if you want to do this you must use the move (MOV) instruction. The register specified in the STR instruction is used to hold the address of the memory to use when storing. So if you put the base address of the screen into R0 and then do a STR R4,[R0] it will store the contents of R4 into the address pointed at by R0.

That's what the square brackets do, indicate an indirect address. Remember the order of instructions is always — operation, source, destination.

Your other problem with R8: it sounds like the variable address has been set up in the screen area, so when you store something in it, it alters the screen.

Or alternatively, the variable is holding a number from 0 to 15 at assembly time which is then taken to be a register which *is* holding a screen address.

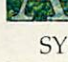
As for your other question, all instructions can be conditional on the state of the flags in the status register. This condition is placed after the instruction. NE stands for "Not Equal" and executes the instruction if the zero flag in the status register is clear (a zero). As the B instruction is a Branch then BNE means branch if the zero flag is not set.

Typically before this instruction will be something that sets up the status register, like decrementing a loop variable. An instruction only affects the status register if an S is tagged on the end of an instruction. However some instructions have no other function but to change the status register, like compare, so the assembler automatically assumes there is an S on the end.

Next up is Leif Hagerup who wants to know about the serial port:



"How do I address and read the serial port to use aN alarm system?"



Like most short questions it has a long answer but basically use:

SYS"OS_SerialOp",6,x to set the TX baudrate (x = 0 to 15, eg. 7=9600 baud)

SYS"OS_SerialOp",5,x to set the RX baudrate.

SYS"OS_SerialOp",1,y to set the data format (y is a bit field)

SYS"OS_SerialOp",3,z to send a byte z

SYS"OS_SerialOp",4 TO ,A% ;C% to receive a byte in A%, flag in C% is set if nothing received.

By return of e-mail he replied:



"Thank you for your quick answer. Unfortunately I don't know much about SYS, OS_Byte and so on. Can you give me some references where to obtain literature? I have tried to interface an alarm system (Welleman) through the serial port using the computer as terminal. To this I use my old Archimedes and have Risc PC with RISC OS 4.02 to other things. I have tried with BASIC and *FX calls with limited result."



All the information about SYS commands are to be found in the Programmers Reference Manual. These days you can get it all on CD from RISC OS Ltd, or many dealers, for about £30. Basically SYS calls are a super set of *FX calls and are used in much the same way.

For example in BASIC to set the TX an RX rate to 9600 baud you just need the lines:

SYS"OS_SerialOp",5,7
SYS"OS_SerialOp",6,7

However I suspect you are looking for a ready-built solution, in that case you need a terminal emulator. There are a few about but one is CONNECTOR and you can get it free over the Net from several places, one such is:

ftp://src.doc.ic.ac.uk/computing/systems/archimedes/collections/hensa/comms/

For a DIY solution then see my articles in December 98, and February and March 97. They deal with serial communications and include examples of code to talk to serial devices.

George Ceridwen is producing screen dumps from his BASIC programs but doesn't know what to do with the resultant files, he wants more control over the colours, he writes:



"I have tried *ChangeFSI*, but could not make it work. I have looked again at the *ScreenSave ".. filename.." instruction on a graphics screen produced by Basic V creating a Sprite file. Two windows appear on screen; a half window showing the graphics with title screendump, and a little window named screendump Colours. (Neither of these is mentioned in the RISC User Guide, Edition 4).

"In the upper LH corner of screendump Colour are two squares; the LH is '0', and the RH is '1'. By trial and error I found that the colour of each square corresponds to the colour of screendump.; '0' represents background, '1' represents graphics. Using Menu I can set the required colour. But I need more control, what can I do? On another matter I have an A/D converter connected to my Master, can such a device be fitted to a Risc PC?"



When you use the Screendump command from within your BASIC program you are creating a sprite format file. This can then be manipulated just like any other sprite file, it's just that it has the name screendump but it is just an ordinary file.

In this way the images you created in BASIC can be incorporated in other documents, *Draw* files and can be processed just like any other file. When you double-click the screen dump file you are actually opening the *Paint* application, you can use this to control/change the colours in your sprite file as you have discovered using the Edit palette function. To make these changes permanent save the sprite (using the small master window).

You have said that you can only change the graphic or the background colour, this is because your original sprite file (created by a screen dump) has only one bit per pixel defining the colour. That is there are only two possible colours in your picture. As you have discovered you can make these any colours you like but you can only have two colours.

If you want more colours then you can do this in two ways:

• Use a higher bit / colour mode when you create your original screen image. I noticed that you don't specify a mode in the printout you gave me. Then alter your program to print different parts of the graph, like axis, curve, labels and so on, in different colours using a GCOL statement.

• Use *ChangeFSI* to convert your sprite to one with more colours. Drag the sprite on to the *ChangeFSI* icon and then from the icon menu select "sprite output" and click on one of the "colours" buttons, say 16, then from the image window save the sprite to your disc. Then by double-clicking this new file you can draw in more colours over the top of your graph, or use the flood fill function to change areas that are joined together.

Information about how to drive *Paint* and *ChangeFSI* are in the User Guide for RISC OS 3.6.

As to the other matter, I have written many articles about using A/D converters with the Risc PC, they mainly connect to the printer port. The Weather satellite decoder in the December 97 issue used a parallel A/D, you can get this from:

www.doc.mmu.ac.uk/Acorn/RTR97.html

The July 98 issue had another A/D with software for an oscilloscope, get this from:

www.doc.mmu.ac.uk/Acorn/RTR98.html

END

Contacting AU

Mike Cook:
rambles@acornuser.com

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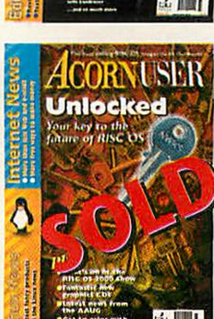


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Super BBC

I have recently been given an Acorn 3010 for my 5 year old autistic daughter to use, she is fascinated with computers and uses a BBC B at school and also a PC.

The applications she uses are simple picture building programs with animals and sounds where she has to press the space bar or mouse buttons to complete. We have a 'box' with jack sockets for switches for the 3010, but no switches as yet.

So to my enquiry. As at the time of the Acorn 3010 launch I was in University being educated in the 'super quick' 386, I know nothing about the 3010 at all, I assume that it is like, and don't take offence, a super BBC (better graphics and so on). Could you, or any reader bring me up to speed on the merits of the Acorn 3010?

As I was always a die-hard Commodore fan (C64 & Amiga 1mb) I would like to play the games I used to play on my now temperamental Amiga on the 3010.

I have been told that it is possible to use Amiga software on the 3010, but not directly (I discovered, should have known better!) As a product of the 1st wave home computer generation I would love to know what are the best titles in each genre of Acorn games for my own gaming pleasure.

Gareth D. Anthony
by e-mail

Nowadays the A3010 doesn't have much in the way of merit, although it is rather more than a "super-BBC Micro" — apart from the fact that it's virtually bomb-proof and does have joystick inputs. What it doesn't have is a fast processor or a hard disc. The speed probably isn't going to be a problem though getting a hard disc attached would probably help.

In regard to any hardware or software needs I would recommend you contact your local dealer — find out who it is using the special feature in this issue. Plus contact the companies whose software your daughter already uses to see what they have for RISC OS. Often the programs will run unaltered.

Whoever said you could run your old Amiga games (in any shape or form) was misleading you. While you may find some games that are similar there are very few Amiga games that came over to RISC OS and it's going to be an adventure finding them. However it is not impossible to find them, once again ask the advice of your nearest dealer.

Acorn Kit?

The cost of being an Acorn owner is very high when you compare it to popping round to Curry's for a home computer.

This is a major problem and unless properly addressed, well obviously the man in the street is going to buy the PC.

What we need is a motherboard produced designed to the ATX standard with RISC OS on board, Fast ARM chip and a SocketA for an AMD CPU.

That way using AGP, PCI slots and the fastest RAM we can build our own RISC OS machines at off-the-shelf prices at the same time be able to use it as a "standard PC" if the software on RISC OS hasn't been written yet.

I think if RISC OS motherboards/components are available separately this will encourage more new users to the platform and enable the competent user or system builder to build their own RISC OS machine for a realistic price.

I find it very annoying that it only costs a little over £300 to build yourself a fast PC, yet in the Acorn world the machine you'd get for that price wouldn't play an MP3. Unless the inflated price of the hardware comes down our market won't last very long for example, a Risc PC costs

Getting connected to secretive ISPs

Ron Collins (letter in *Acorn User* March 2001) has found that some ISPs are shy about publishing on their CDs all the information required to connect fully. They prefer to give you enough info to make a basic connection and then sign up. They then reprogram your (Wintel) PC. LineOne seems to be one, and now Supanet seems to be another.

If you already have an account set up on your Wintel, all the information is stored on your machine.

Assuming you have Windows 98 (others are similar) double-click on the My Computer icon on the desktop, then on Dial Up Networking. Right click on the icon for the Dialup connection of interest, and select Properties. The General properties tab gives the Telephone number and Login name. The Server Types tab will usually show the TCP/IP box ticked, and the PPP protocol selected (I assume you are not on a network).

Click the TCP/IP Settings button on this tab to bring up the Primary and Secondary DNS addresses (number sequences). This tab will also show if you have a fixed IP Address (not usual) or a Server Assigned IP Address. You obviously know your User Name and Domain from your e-mail address, and your Password.

A forgotten password can be found in the passwords file in Windows/System.

Now run Outlook Express, click on Tools on the button bar, and select Accounts... to discover the Mail and News Server details.

If all else fails, log onto your ISP and look at the Technical Support pages on their site. Any half-decent provider will show all the details required to connect, and may even have a guide to manual setup for Wintel, Apple and Linux. Hope that helps.

Martin Hodgson
by e-mail



Micro?

at least a thousand pounds which for the spec. quite frankly is ridiculous.

Supporting AGP, PCI and USB can only bring us good things even if only a few cards/devices are supported to begin with.

Andy Nelson
by e-mail

You certainly make some interesting and valid points — but I would just say that the fact that we don't all drive the cheapest car shows that there is something more then price at work and that's what needs tapping into.

Where's the help?

I am a newcomer to the computer scene in general and to RISC OS in particular. I have an Risc PC 600 and a Microsoft computer. I want to learn to use the Acorn as everyone tells me how logical and user friendly it is but so far that is not my experience.

I bought my Acorn secondhand and have the RISC OS 3 User Guide but seem to be making little or no progress in understanding the system. I have a friend who is conversant with the system but having already taken up far too much of his time I would like to become independent. By contrast with the Acorn I find the Microsoft amazingly easy. (From the same low level of understanding.)

My question is this, how or where, do I find a source of information that will enable me to use the Acorn as this is what I want to do? At the moment I feel that the RISC OS system is for experienced users only. Please tell me that I am wrong, that there is a source of information and that beginners are welcome and encouraged.

I give one small example. If I want to find out something I don't understand on the Microsoft I look in the help file. I can find nothing in the Acorn which is a fraction of the use. I am quite prepared to believe that the information is in there somewhere but I am unable to gain access to it. (When I do I cannot understand it!)

My feeling is that Bill Gates (who seems to be reviled by Acorn users) assumes that a person with no experience will buy his machine and may probably want to use it. At the moment I cannot feel the same about the people who are involved in RISC OS.

I am writing this on my Microsoft because the Acorn will not at the moment let me on to the Net and I have no idea how to find out what is wrong. When the Microsoft has had problems I have managed to get it running again. I would prefer to be an Acorn user but I obviously need help as the challenge is becoming too great and I keep using the Microsoft as it is so much more user friendly.

So as not to embarrass the person who has already given me a lot of help please don't publish my name.
Thanks.

Unfortunately I have to agree with you completely as far as the help issue is concerned. There is a problem with RISC OS and it is that there is very little to help the beginner. All systems have their own personality and if you are used to one it can be quite difficult to adjust to another — having your PC to hand does mean that you are not forced to find out how RISC OS does things which is a disadvantage.

But, for whatever reason, software developers whether commercial or public domain, after many many years of experience, seem to get the feeling that things are "obvious" and do not take the viewpoint of the complete novice.

While I personally feel that it would be good practice to promote RISC OS as the system you aspire to after having a PC that still doesn't mean the beginner should be ignored. Windows goes much too far in assuming it knows best when it comes to what the user wants — I get very frustrated when a major program won't let me do what the simplest RISC OS program will. But RISC OS probably leans too far in the other direction.

As for solving your need for help the best thing is to contact your local user group which you can find via **www.aaug.net**. *Good luck.*

The incompatible word

One day last week, I was greeted by a teacher waving a floppy disc at me. She feared that she had forgotten all the ICT I had taught her over the last year.

In a conscientious attempt at incorporating ICT into her Literacy Hour, she had produced a set of worksheets on her home computer, in *MSWord 2000*, but could not get them up on the network.

After explaining the process again and later sending an able child (who had done this task many times) I had to concede defeat until I had time to look at the computer myself.

Later, the same day, another teacher came to me, also waving a floppy disc. This teacher had been on a course using *MSOffice 2000* and been given some files to use in school. She had tried to read them at home and also on the school computers.

"They are all .DOC files," she said. "I can't understand why they won't work!" I had to admit that neither did I, except that the common factor appeared to be *MSWord 2000* — but surely Microsoft would incorporate some backwards compatibility?

As a long shot I suggested to the teacher to try loading her documents in *EasiWriter* on my A7000. I explained that, although *EasiWriter* is excellent, it would be unlikely to read *Word2000* files, when other versions of *Word* and Lotus *WordPro* had failed.

How good it felt to be so surprised. Without any problems whatsoever, *EasiWriter* pulled these *Word2000* files up immediately. Well done Icon Technology! They have truly excelled themselves with this one.

Graham Wootton
by e-mail



David Coronel

The percussion section of an orchestra has always intrigued me, I think it caught my imagination when I found out it included a whip, for any doubters of this fact, you could listen to Mahler's 7th symphony. However another first for *Acorn User* could not be missed, this time a percussionist.

David Coronel runs The Data Store, a High Street computer store which he opened in June 1983 and it still has a highly visible display of RISC OS machines. If running a store single-handedly is not enough David also does the text support for the Acorn version of *Sibelius*, has a very busy musical life and is dog-walker-in-chief.

'Primarily, I'm a musician.' begins David. 'If I've ever had any kind of sudden, miraculous event that changed my life, it was singing the Verdi Requiem as a treble at the age of 11 in the school choir. I've been a singer ever since, though nowadays as a tenor. That experience of being a small cog in a huge machine was overwhelming.

'A couple of years after that I joined the school orchestra as a percussionist in Holst's Planets Suite, which was nearly as overwhelming. There, you still have the feeling of being a small part of a larger body, but you are also a soloist, so there's more responsibility'

> A new computer called a BBC Micro

I think David's description of being a percussionist makes an excellent a analogy for being part of the Risc OS market

'I gave up playing percussion after leaving university because I didn't own my own instruments' continues David ' About five years ago I decided to buy a set of timpani (kettledrums), and since then I've added most of the standard orchestral instruments.'

Being a classical scholar David was totally uninterested in computers. It was only when he was at a loose end after university, his friend Lawrence Liffchak introduced him to a Tandy TRS-80. David's father on seeing the amount of time they were spending with the computer, suggested that they should computerise his plumbing business.

'Lawrence said that he had heard about a new computer that might do the job called a BBC Micro. Beebs were like gold dust at the time, but we were incredibly lucky to phone a place called CompShop in New Barnet. They had just had a delivery of thirty, of which three were going spare. So we dashed over and bought it.

'Within about three months we were fed up with using cassettes so we hunted around and managed to track down a disc interface and dual 100K floppy drive from a shop in Guildford. We had also bought a daisywheel printer from a place in Rochester. My father started moaning 'why do we have to travel so far to get all these things? Isn't there anywhere round here?' To which the answer was 'no'. 'Well, why don't we open our own place?' So we did.

At first, we sold Atari, Dragon, Oric, Sinclair and Acorn machines, but within about a year, we had dropped everything but Acorn. They were the only type whose users came back to buy other things, other than a few games. Times were tough at first. The margin on BBC Micros was about 8% if I recall, but we had a lucky break when a customer who had bought a Beeb from us came in and asked if we could handle a large order — he was the MD of a medical company who had developed a computerised blood analyser which could be controlled and monitored by a BBC Micro.'

'The best business day we ever had is amusing. It was the first day of the Acorn User Show 1991, when Acorn launched the A5000. They decided to operate a bizarre scheme to avoid immediate predatory price cutting by the bigger players in the market.

'The entire stock of computers was kept in a huge lorry outside the hall, and to buy one you had to go to any Acorn dealer exhibiting at the show, pay your money and then bring the receipted order form to the lorry to collect the machine. It was great for us because we didn't have to pay up-front for a pile of stock which we might or might not sell, or take a huge stand to accommodate all that stock.

'Anyway, John Durrant cooked up a great idea before the show started, while the queues were forming outside, he went through the queue handing out the special order forms stamped with our dealer stamp, so people would be encouraged to buy their computers from us. Other dealers spotted what he was doing and decided to try the same trick, but the organisers put a stop to it, but not before we'd handed out a fair number of forms.

'We ended up selling about 30 machines on that first day, which for us was a huge amount. That evening, I went straight from Wembley to Covent Garden for a performance of Das Rheingold by Wagner, and I had to carry the day's takings with me — if anyone had known how much I had in my bag'.

Chat turns to the *Acorn User* advertisements which featured Tristan the Elite-playing Golden Retriever ... urm? I wonder which part of the percussion Tristan played?

Jill Regan



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